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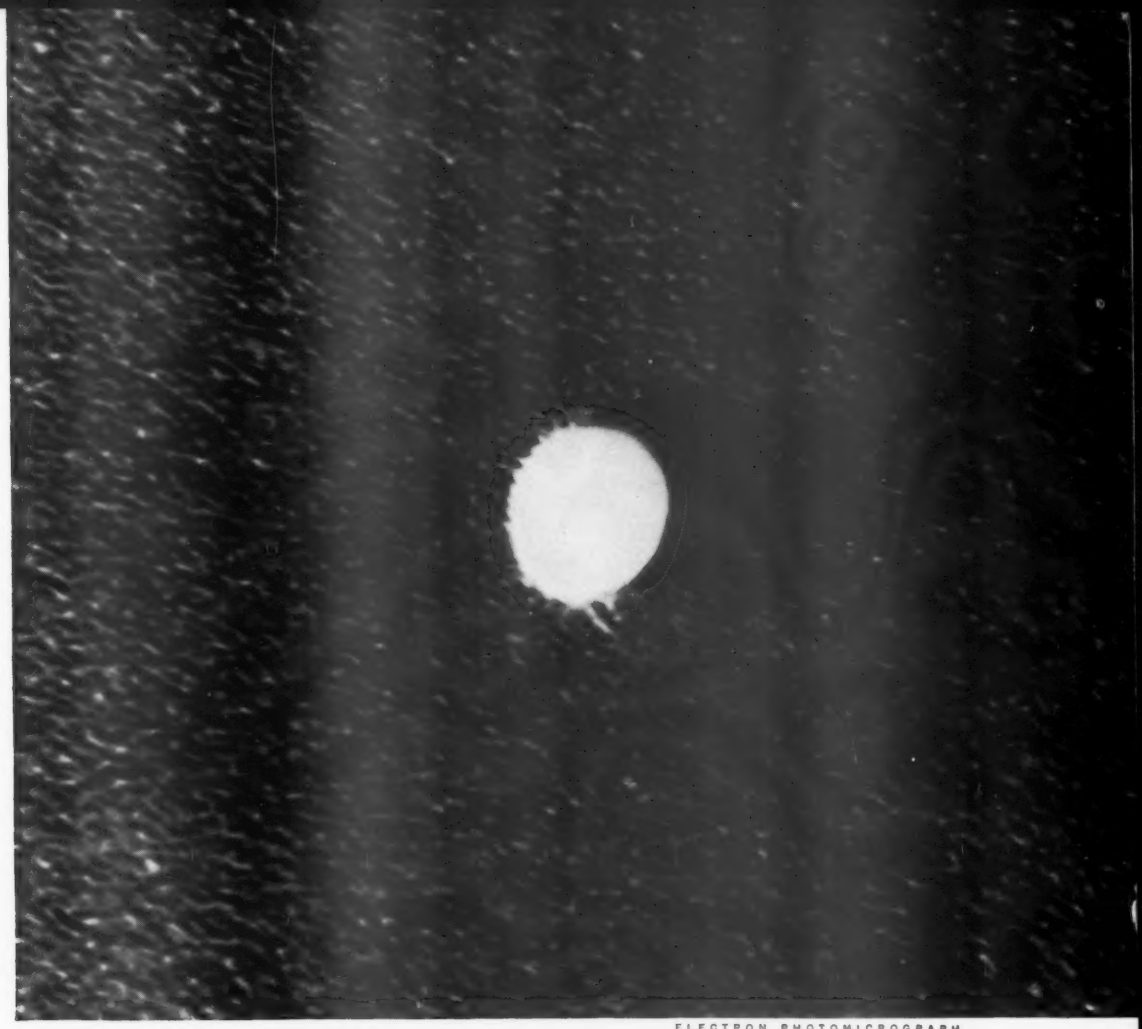

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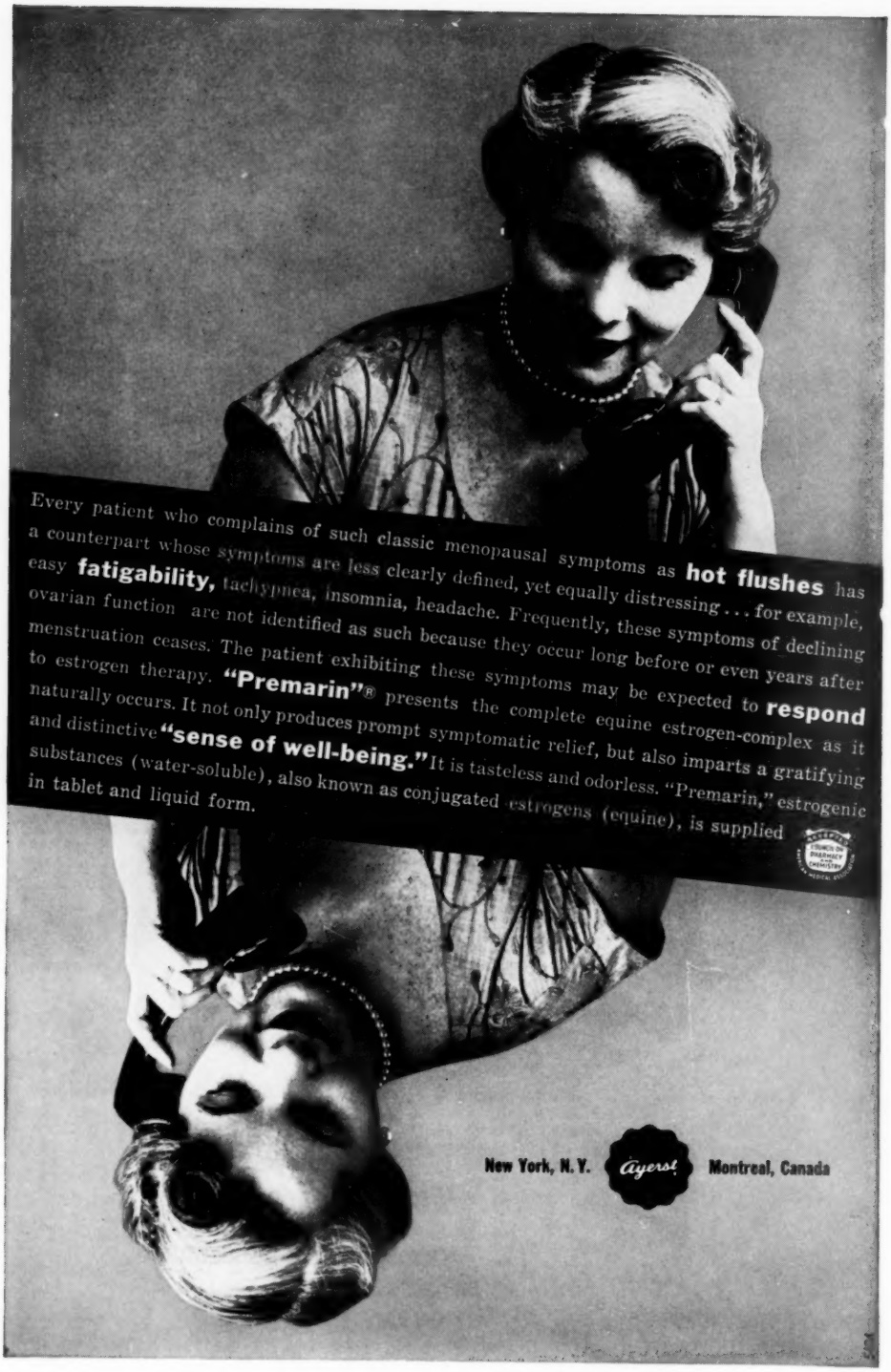
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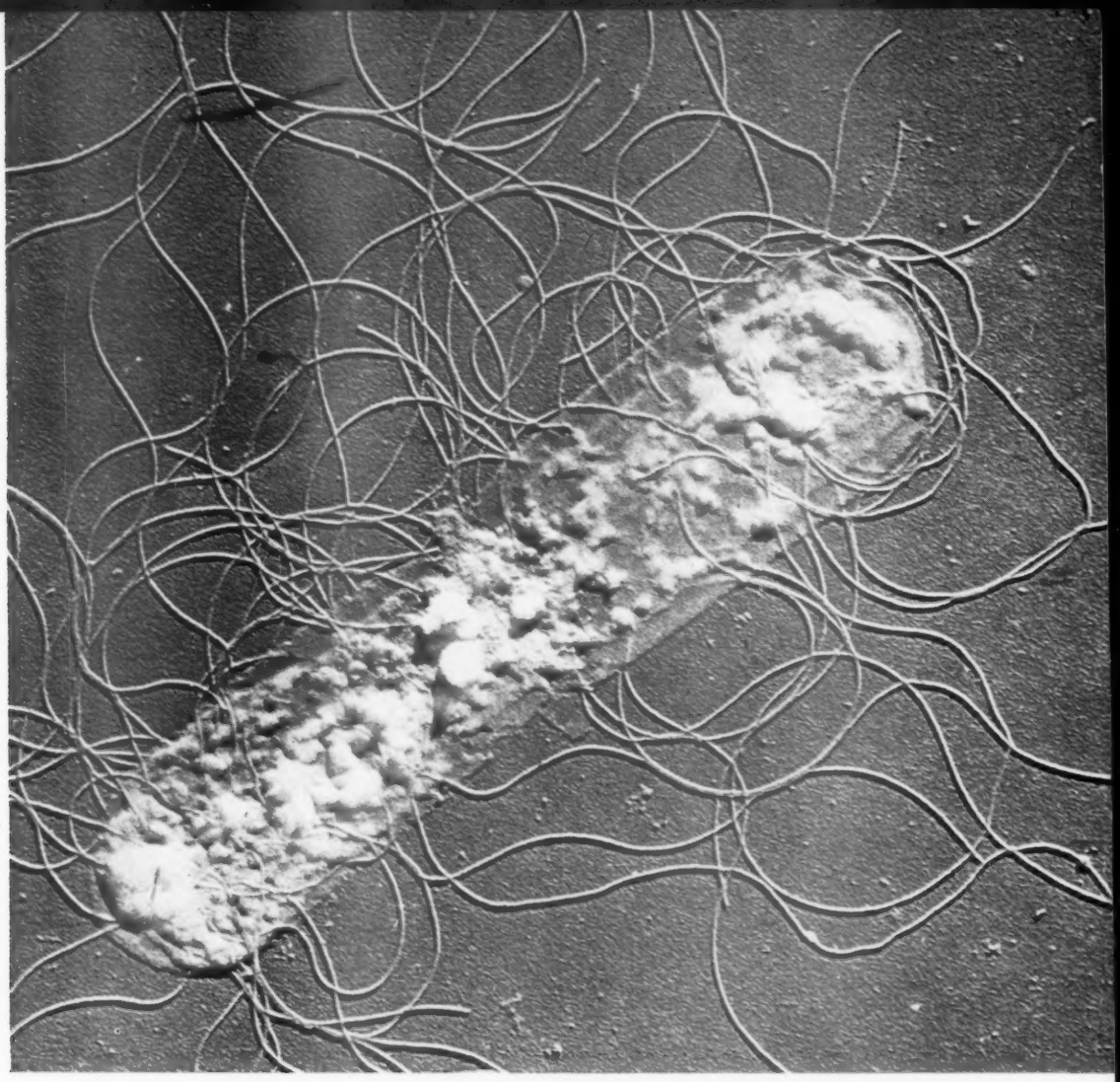

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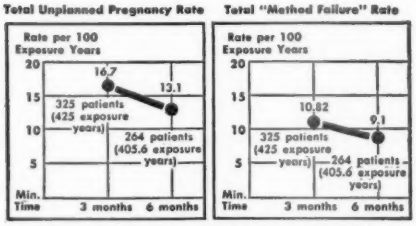
(Continued on page 14)

PSYCHOLOGIC MOTIVATION AND CONCEPTION CONTROL

Psychologic motivation, defined as "... the sincere, urgent, uncomplicated desire to remain nonpregnant..." is an increasingly recognized factor in the success or failure of contraceptive measures.[1]

One of the factors influencing motivation, namely, parity, was appraised by Guttmacher[1] and associates in a three-year study of the jelly-alone [RAMSES® VAGINAL JELLY] method for contraception. A carefully selected group of 325 postpartum clinic patients used RAMSES VAGINAL JELLY for periods representing a total of 425 patient years of exposure. The technic showed marked effectiveness but was especially successful "among patients of lower parity."

Although the method was highly dependable, some unplanned pregnancies did occur. The pregnancies were divided into "patient failures" and "method failures." Patients readily admitting omission or irregular use of the jelly were classified in the first group, while those claiming regular and faithful use of the jelly were grouped in the latter category.



Comparison of conception control with RAMSES VAGINAL JELLY in patients using the method for 3-36 months and 6-36 months.[1]

During 425 patient years of exposure in 325 women using the jelly, the total unplanned pregnancy rate was only 16.7 per 100 patient years of exposure. When the "method failure" for the entire group is calculated, the unplanned pregnancy rate drops to 10.82 per 100 patient years of exposure. When only those patients who used the jelly-alone technic for six months and longer are considered (the usual length of time accepted for valid comparisons) the pregnancy rate is decreased markedly. This indicates that familiarity with and reliance on the method are probably also important. In 264 such patients, during 405.6 patient years of exposure, the total unplanned pregnancy rate was only 13.1 per 100 years of exposure, and the method failure rate dropped to 9.1 per 100 years of exposure.

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1. Finkelstein, R.; Guttmacher, A., and Goldberg, R.: Am. J. Obst. & Gynec. 63:664, Mar., 1952.

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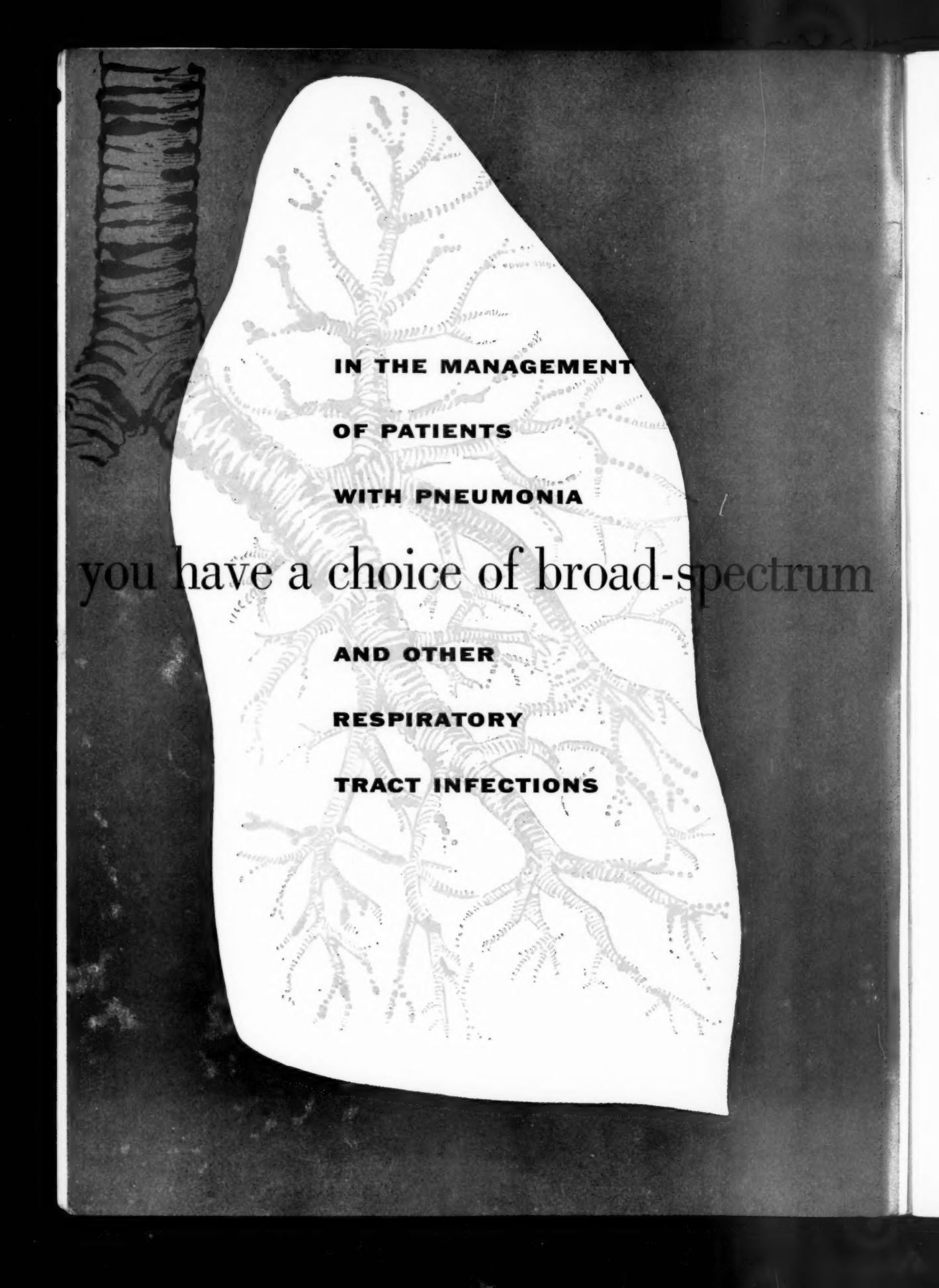
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1. *O'Regan, C., and Schwarzer, S.: J. Pediat. 44:172 (Feb.) 1954.*
2. *Waddington, W. S.; Bergy, G. G.; Nielsen, R. L., and Kirby, W. M. M.: Am. J. M. Sc. 228:164 (Aug.) 1954.*

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(Continued on page 18)

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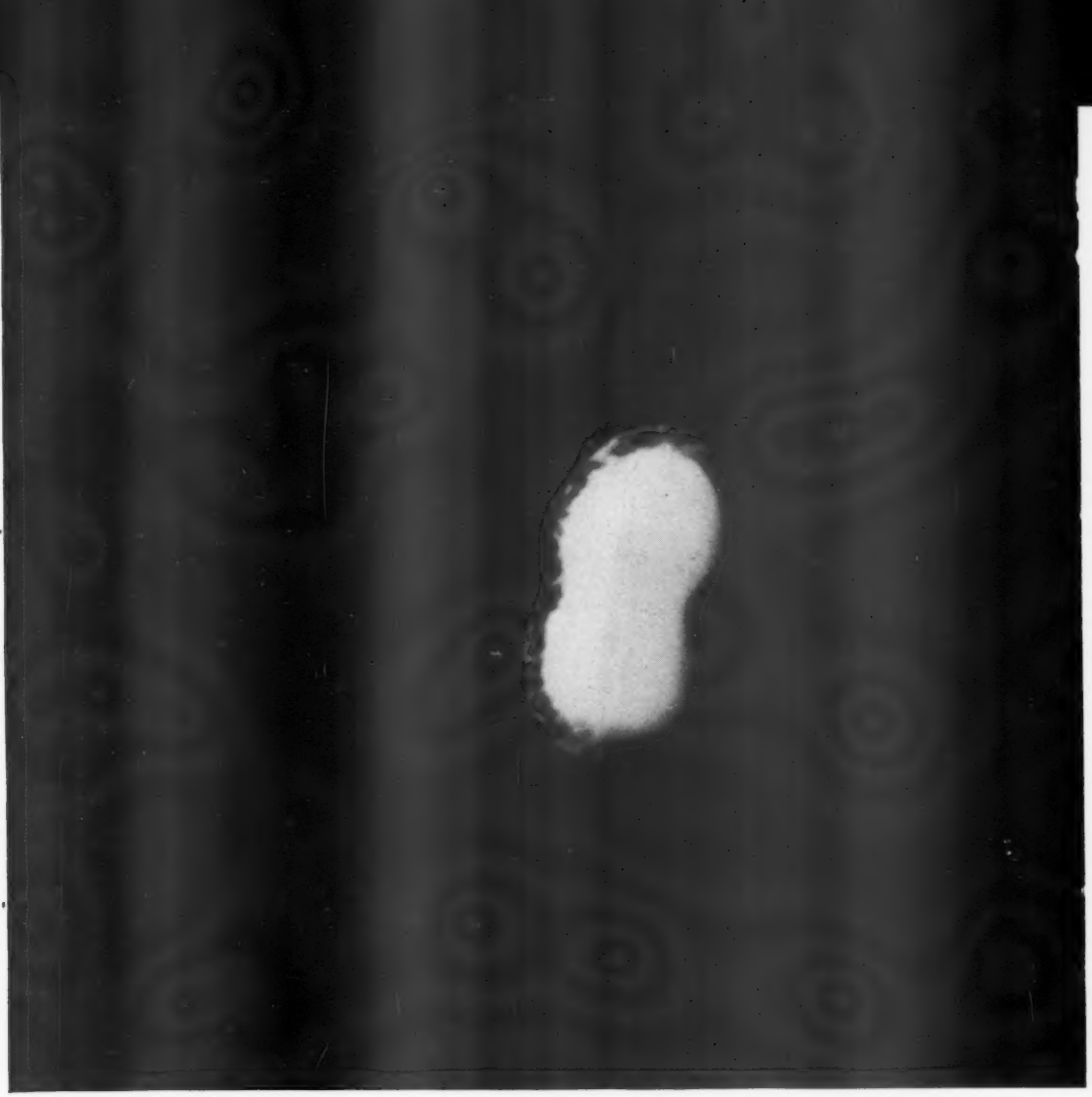

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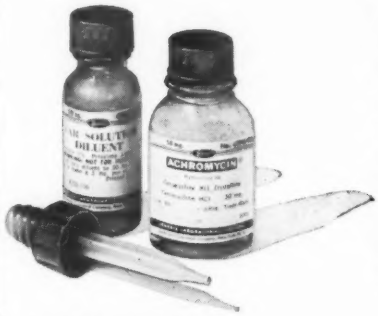

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1. Heller, E. M.: The Treatment of Essential Hypertension. *Canad. Med. Assn. Jour.*, 61:293, Sept., 1949.

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NEWS of ATOMIC ENERGY FOR CONSTRUCTIVE USES

As the meanings of atomic energy benevolent to mankind were revealed to those who visited the Atoms for Peace Exhibit in New York last month, the umbrella cloud which has represented atomic energy faded from their minds. Before starting on its journey to India and Pakistan, this exhibit, produced by the United States Information Agency, paused for a private showing to the Delegates at the United Nations; then moved to Hunter College where the doors were opened to the general public after a preview which attracted the interest of industrialists, religious and educational leaders, officers of service clubs, and social service organizations.

The aim of the exhibit is to bring to peoples in various parts of the world the story of how the energy of the atom is being applied and can be further applied to peaceful pursuits. It is in support of President Eisenhower's proposals made before the United Nations General Assembly just one year before—proposals which formed the basis for the "Atoms for Peace" resolution passed unanimously by the United Nations General Assembly on December 4, 1954. Similar exhibitions have already found their way to Brazil, West Germany, Italy, and Belgium. They will visit additional countries during the coming year.

All phases of peaceful atomic energy development are covered in 350 linear feet of animated demountable panels and models. Special sections are devoted to the uses of nuclear heat for the generation of electric power and to the uses of radioactive isotopes in agriculture, medicine, and industry. The panels in the medical section give graphic evidence of the action of radioisotopes in the battle against cancer and brain tumor. Other medical aspects of radioactivity include the preservation of the life elements in foods, such as vegetables—potatoes and onions being the examples exhibited. There is now in progress a study of the effects on human life of foods so treated.

Three short motion pictures, "A is for Atom" and two documentaries on "Atoms for Peace," were shown in the Hunter Playhouse. They served the purpose of bringing within the mental grasp of the layman the infinite variety of applications to which this energy lends itself. The documentaries were filmed against the background of the laboratories at Brookhaven and Oak Ridge.

Sponsoring the exhibition was the Atomic Industrial Forum, a body established last year to assist in the peaceful development and application of atomic energy. It is a nonprofit membership organization listing more than 200 business organizations, labor unions, universities, and research laboratories as members.

News notes on ATOMIC ENERGY FOR CONSTRUCTIVE USES of interest to the medical profession will appear in these pages from time to time.

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1. Yow, E. M.; Taylor, F. M.; Hirsch, J.; Frankel, R. A., & Carnes, H. E.: *J. Pediat.* **42**:151, 1953.
2. Dodd, K.: *J. Arkansas M. Soc.* **10**:174, 1954.
3. Hanbery, J. W.: *Neurology* **4**:301, 1954.
4. Miller, G.; Hansen, J. E., & Pollock, B. E.: *Am. Heart J.* **47**:453, 1954.
5. Keefer, C. S., in Smith, A., & Wermer, P. L.: Modern Treatment, New York, Paul B. Hoeber, Inc., 1953, p. 65.

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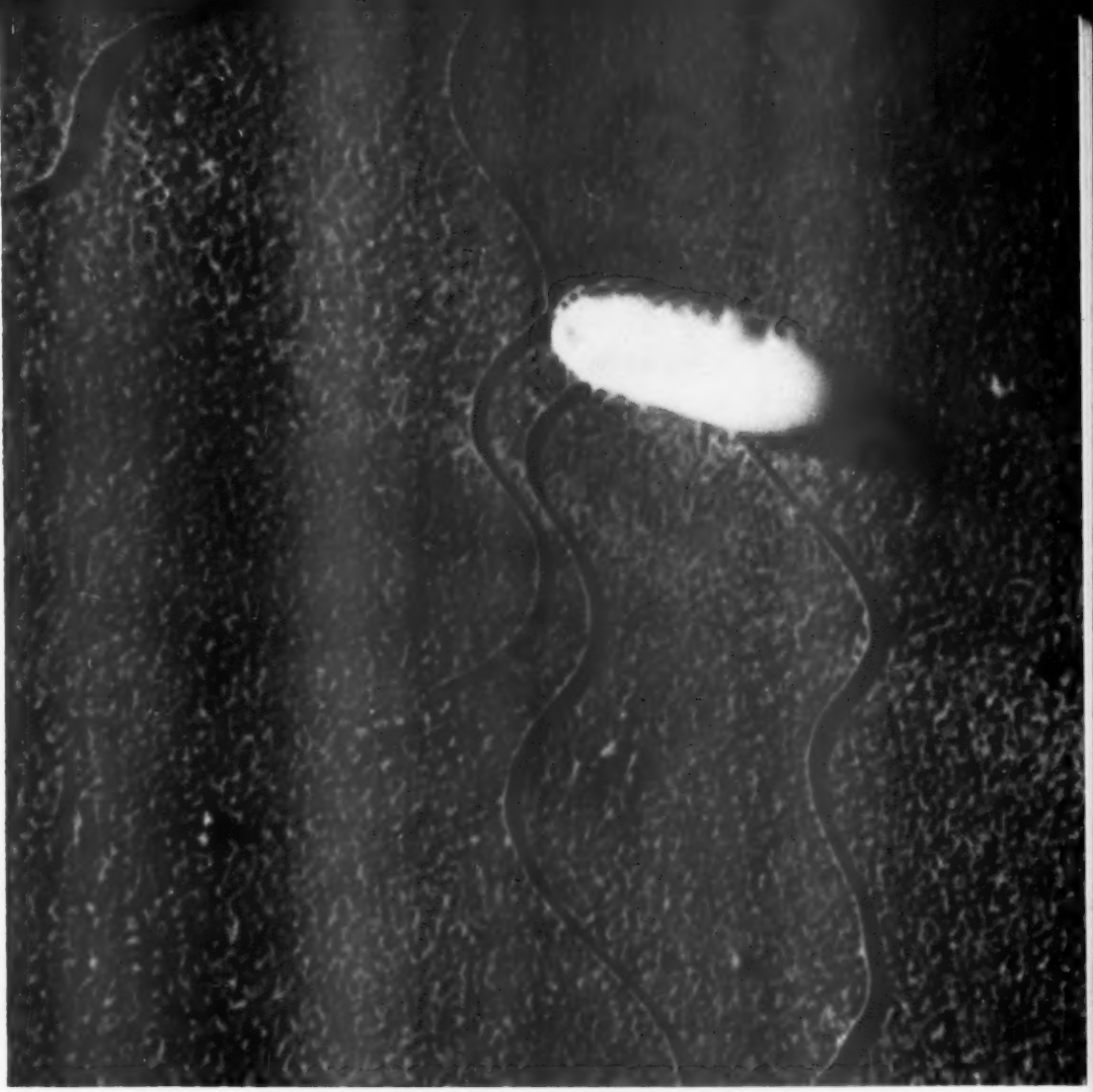

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SOUTH AFRICA REPORTS . . .

. . . Considerable quantities of radioactive isotopes are imported into South Africa each year for use in agricultural research, biology, medicine, and industry, and South African scientists have developed an ingenious method of transporting these radioactive isotopes in the wing tips of aircraft. This method has long been applied with success and in no way endangers the safety of air personnel or passengers. While radioactive isotopes are not, as yet produced locally, it is hoped that the production of short life isotopes will start this year when a cyclotron, which is being constructed by the South African Council for Scientific and Industrial Research, will have been completed. In the meantime a Nuclear Physics Institute, where nuclear spectroscopy will be undertaken, has already been completed for the South African Council. (Union of South Africa Govt. Information Office, Nov. 11, '54).

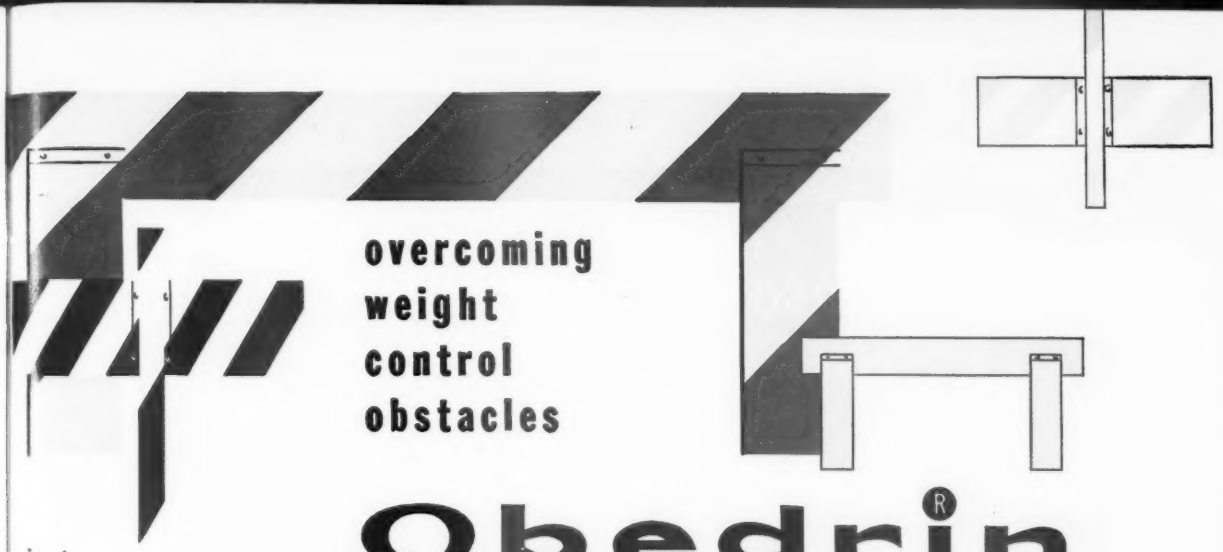
NEW "BACTERIA LIBRARY" IN PRETORIA

A "bacteria library," which will eventually house thousands of different types and strains of bacteria found in many parts of the world, has been opened in Pretoria. The first of its kind in the Union, it will be run by the South African Bureau of Standards. The collection is available to all authorized persons, organizations, and interests in the Union, and exchange arrangements with other countries are being made. Technical officers of the bureau's fast-developing microbiologic laboratories are the "librarians." It will take many years to build up a sufficiently representative collection to satisfy the Union's needs. There are a number of private bacteria libraries in the country, but these cannot supply all the type-cultures needed. (Union of South Africa Govt. Information Office, Nov. 11, '54).

COFFEE DRINKING ORACLE

The buried shrine of Apollo under the Bishop's garden in Assisi has revealed many secrets. Among these is one concerning the shrouded rites of Apollo and his prophetic priestess, Pythia. It was betrayed by an unobtrusive wall decoration. The drawing shows a little plant, with stem, leaves and fruit—unmistakably the familiar coffee bean. This is the first proof that coffee was known in the Roman world.

Priests of Apollo were certainly aware of the stimulating quality of the bean from Caffa, the ancient Ethiopian province. To help their prophetess clear her "vision" and keep her in a state of excitement without which no oracle is worth while, they probably imported, via Egypt, the miraculous drug, the same drug which, according to Heroditus, when eaten for the first time by some unsuspecting goats, had made them jump about as if demented. (*The Italian Scene*, Oct.-Nov-Dec. '54).



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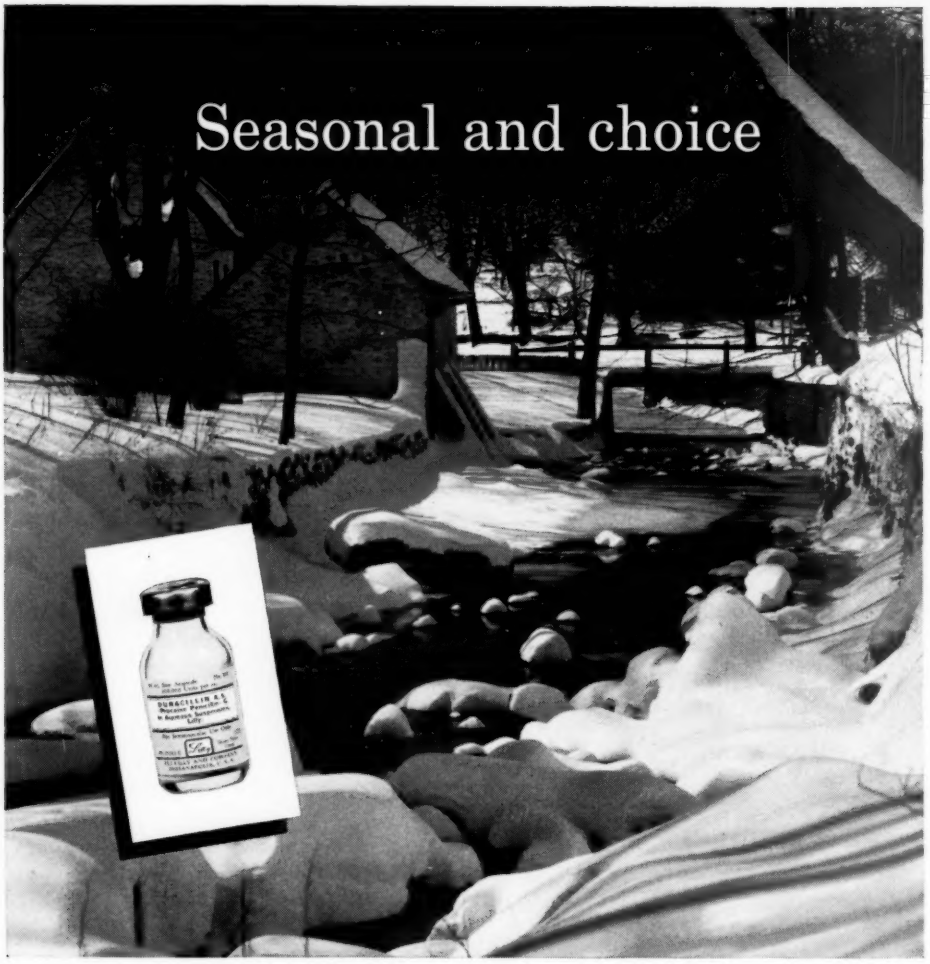

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Journal of the
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Primary Amenorrhea

Della G. Drips, M.D.

DURING MY YEARS as a member of the section of obstetrics and gynecology at the Mayo Clinic, I had many patients who complained of menstrual irregularities. As a rule, the cause of the irregularity was easily discovered, but occasionally it presented a difficult diagnostic problem. The diagnosis often was even more involved in cases of primary amenorrhea, in which the patient never had menstruated, because so many causative factors had to be considered.

Patients who have never menstruated may be of any age. Usually the older women have become more or less accustomed to their condition and are not too much concerned, unless other symptoms develop which they think may be associated with the absence of the menses, or unless, if married, they still hope to become pregnant. The younger women from 15 to 25 years of age are greatly concerned, and it is these girls in whom the physician should be most interested for if anything can be done to establish normal menstruation, the younger the patient is, the better.

The girl who does not start to menstruate at the usual age of about 13 years begins to feel that she is different from other girls of her age. Her parents then become concerned for her, thinking that perhaps they are to blame in some way for her condition. They wish to do all they can to remedy the situation. To satisfy both the patient and her family, it is wise to make the most careful study possible in order to arrive at a correct diagnosis, a reasonable prognosis, and a decision as to the most effective treatment, if any is required. Such a study includes obtaining an accurate history, performing a thorough physical examination, and making certain relevant laboratory tests.

Dr. Drips is Emeritus Member, Section of Obstetrics and Gynecology, Mayo Clinic, Rochester, Minnesota.

Although the chief complaint of never having menstruated is all-important, it is essential that the physician, in obtaining the history, try to elicit information concerning any other symptoms which the patient may have. In the case of a young girl, the absence of the menses is usually the most important symptom in the minds of the girl and her parents, and often they neglect to mention other symptoms or unusual physical signs which they may have noticed.

The history should begin with the patient's birth, as an account of her general development is extremely important. Did her general development lag behind that of others of her age? If so, when was this first noticed? She may be just lagging behind at puberty Also, any serious illness prior to or coincident with puberty should be considered carefully as a possible causal factor in her failure to menstruate.

The family history is important in that in some families the women tend to have a late menarche and long intervals between the menses. Also, certain types of physique, texture and distribution of hair, and development of the breasts may be familial and constitutional and unrelated to any abnormal function of the endocrine glands.

The physical examination is very important.

The height, the weight, general development, and development of the breasts and external genitalia should be compared with the normal for the patient's age. Distribution of body fat, color and texture of skin, presence of acne or striae, and texture and distribution of the hair of the head and body should be noted.

A careful examination of the vaginal orifice and fourchet often will reveal some significant congenital malformation. If it is not possible to examine the pelvis via the vagina, an examination should be made by rectum in order to determine, if possible, the presence of a uterus and ovaries. It may be necessary to repeat this examination several times to be sure of the findings. At times, the pelvic examination will have to be done with the patient under anesthesia.

Laboratory examinations and tests should include the routine blood counts, urinalysis, and a determination of the basal metabolic rate. Roentgenograms of the thorax, and of the head with the view focused over the region of the sella turcica, should be made. In certain cases, when an adrenal tumor is suspected, intravenous urography may be most helpful. This should be used, also, in cases of pelvic anomalies. Anomalies of the kidneys and ureters may be present, and it is best to know the condition and location of these organs. An ectopic left kidney, for example, could easily be mistaken for a tumor in the left side of the pelvis.

The developments in endocrinology over the past 30 years have been helpful to physicians trying to arrive at a correct conclusion as to which of the endocrine glands may be the source of the trouble in each case of primary amenorrhea. Tests for the amounts of gonadotropic hormone, estrogenic hormone, and 17-ketosteroids in the patient's urine aid in determining which endocrine gland of those chiefly concerned with the menstrual process is responsible for failure of the menarche. Such tests are now standard procedure and are usually ordered routinely in these cases.

Biopsy of the endometrium helps greatly, in certain cases, to determine whether or not failure of the genital tract (müllerian ducts) or a subthreshold cycle in the endometrium may be responsible for the absence of menstruation.

A few years ago I made a survey[1] of cases of primary amenorrhea in which the patients had undergone hormone studies and it was found that the final diagnosis in each case fitted into the following classifications, which, although not all-inclusive, have been useful in sorting out the more common conditions associated with primary amenorrhea:

I. Physiologic or so-called functional amenorrhea (absence of menstruation with normal findings)
II. Delayed menarche
III. Functional failure of pituitary body owing to faulty development (with or without dwarfism)
IV. Functional failure of ovaries owing to developmental defects
V. Functional failure of genital tract owing to faulty development
VI. Congenital anomalies of genital organs
    A. Defective development or absence of vagina
    B. Defective development or absence of uterus or müllerian ducts
    C. Defective (rudimentary) development or absence of ovaries (ovarian dwarf syndrome)
    D. Hermaphroditism
VII. Dysfunction of endocrine glands secondarily associated with the menstrual process
    A. Thyroid (juvenile myxedema)
    B. Adrenals (hypofunction and hyperfunction of adrenal cortices)
    C. Pancreas (diabetes)
VIII. Pathologic states of endocrine glands
    A. Pituitary tumors or brain tumors impinging on pituitary so as to interfere with its function
    B. Tumors of adrenal cortex
    C. Ovarian tumors
    (The onset of tumor must be prior to or coincident with puberty to prevent the menarche)

Physiologic Amenorrhea

In any group of amenorrheic women, some women will be found who are apparently normal in every regard except that they do not menstruate. There is, at least, no external show of the menstrual discharge. The cause of amenorrhea in such cases is obscure, but the endometrium must be at fault, though to all appearances it is normal at all times in the cycle. Schröder[2] stated the opinion that "desquamation and bleeding take place but, due to a deficient blood supply or excessive uterine contractions, the loss of blood is so minute as to pass unnoticed." According to Hoffman,[3] "a full-term pregnancy with its marked vascularizing effect on the uterus may correct this condition." It is known, also, that full term pregnancies may occur one after another without even a first menstruation. So, if

a young woman proves to be normal by all known measurements for normalcy, it is wise to explain the situation to her and encourage her to marry if she wishes.

Delayed Menarche

Delayed menarche may also indicate a fairly normal situation. Physically, the girl's development may be almost normal. The breasts, external genitalia, and axillary and pubic hair may be developing. Tests of the urine may show small amounts of estrogenic hormone even though she has not had any pelvic discomfort or vaginal bleeding. If such is the case and results of routine laboratory examinations reveal a normal basal metabolism and other normal findings, it would seem best to await developments, though the girl may be three years beyond the usual age for the menarche.

If, on the other hand, the girl reaches her seventeenth year and the breasts and genitalia still do not show any sign of development even though she is well developed generally, and the urine does not contain any pituitary gonadotropic hormone or estrogenic hormone, the delay in the appearance of the menses assumes a more serious aspect. If the routine laboratory examinations show nothing unusual, the failure is probably with the anterior lobe of the pituitary. We assume the pituitary reaches a stage of functional development at puberty. It is the motor for the ovaries. Its gonadotropic hormone (follicle-stimulating factor) stimulates the development of the ovarian follicles which, in turn, secrete the estrogenic hormone that brings about the development of the accessory organs.

The secretory function of the anterior lobe of the pituitary tends to be adversely affected by exogenous factors. This has been noted among women who have been menstruating normally before amenorrhea developed. So, it is not strange that poor dietary habits prior to puberty, leading to marked underweight or overweight, or emotional disturbances before or synchronous with puberty might prevent the secretory function of the pituitary, or at least the secretion of the gonadotropic hormone, and so delay the onset of menstruation.

Hence, it is reasonable to correct any faulty dietary and health habits of these patients if functional failure of the pituitary is suspected. Whenever a reduction regimen is instituted, it is essential that a sufficient amount of protein and foods high in vitamins be included because pituitary function may be affected by a lack of these foods in the diet. This was called to my attention especially years ago when I was asked to see several girls who had been put on ketogenic diets for petit mal, following which amenorrhea had developed.

If the patient's basal metabolism is within the lower range of normal or even lower (without evidence of myxedema), as is so often the case in pituitary hypofunction, it is advisable to raise the rate by giving small doses of desiccated thyroid extract. Several determinations, of course, are necessary both to verify the rate and to raise and establish it on a higher level. As a rule, it is advisable to bring it up to around zero and hold it there for several months. This, alone, may bring on the menses. If not, estrogenic hormone should also be given daily for the same three weeks of each month for several months. If vaginal bleeding occurs on withdrawal of the estrogen, administration of the hormone may be discontinued entirely to see if true menstruation has been induced. Estrogen increases the size of the uterus and primes the endometrium. Its withdrawal stimulates pituitary function. In time, ovulation results from pituitary stimulation and normal menstruation occurs. Thyroid extract presumably stimulates the general metabolism and its use should be continued for a time after the menses have begun, to establish regularity. The rationale of the thyroid therapy in these cases has been questioned recently by Buxton and Herrmann,[4] but experience shows that it is often beneficial.

Among the cases reviewed were those of two young women, aged 19 and 22, who had never menstruated. The breasts and external genitalia of both showed slight development, and some axillary and pubic hair was present. The uterus of one patient was of the infantile type and that of the other was smaller than normal. The basal metabolic rates averaged -10 and -11 percent respectively. Other routine laboratory examinations revealed nothing unusual. The urine of both patients excreted in 24 hours contained only a small amount of estrogenic hormone, 7 rat units in one case and 10 rat units in the other. The presence of estrogen in the urine is always a favorable sign in amenorrheal patients and, at times, is the only evidence of any ovarian function. These two young women were treated as previously described and were menstruating regularly at the end of a year.

If, after several months' treatment with thyroid extract and cyclic administration of estrogen, the older girls in this group do not begin to menstruate, roentgen therapy in small doses over the pituitary and the ovaries is advised.[5] Sometimes this treatment will stimulate menstrual flow even though medication has failed. However, to establish regular periods, it may be necessary to continue the administration of thyroid extract and cyclic administration of estrogen for a time. If the young woman is married and is fortunate enough to become

pregnant soon after the roentgen ray treatment, she may not have further trouble. Some of these women have a tendency to abort, which should be avoided by the administration of thyroid and estrogen throughout the pregnancy.

Functional Failure of Pituitary Body Owing to Faulty Development

If the menses cannot be instituted with the treatment suggested, it is logical to assume that the anterior lobe of the pituitary has failed to develop sufficiently to perform its secretory function. This failure may affect only the cells which secrete the gonadotropic hormone. In such a case, the young woman's general physical development may be normal, except for infantile breasts and genitalia. Likewise, the pituitary gonadotropic and the ovarian estrogenic hormones will be absent in the urine.

If the secretion of the other pituitary hormones is interfered with, growth may not proceed normally, and dysfunction of other endocrine glands occurs. If the growth and gonadotropic hormones of the anterior pituitary are congenitally absent or are not secreted beyond childhood, the result is pituitary dwarfism.

Functional Failure of Ovaries Owing to Developmental Defects

If the ovaries cannot respond to stimulation from the pituitary, menstruation does not occur. Exploration often has revealed such ovaries to be narrow and elongated like the infantile type. The surface of the ovary is smooth and the follicles are in the early stages of development. At times, the ovaries are described as having a thickened capsule.

Girls with developmental failure of the ovaries may appear generally like those with pituitary developmental functional failure; but on examination of the urine for the hormones, a normal or higher than normal amount of pituitary gonadotropic hormone is found, and no estrogen is demonstrable. This, of course, is evidence that the fault is not with the pituitary but with the ovaries.

Functional Failure of Genital Tract Owing to Faulty Development

Young women in whom the genital tract has not developed sufficiently for the endometrium of the uterus to be capable of responding to the stimulation of the estrogenic hormone of the ovaries, will not menstruate. Such women may have well-developed breasts and normal external genitalia. The pituitary gonadotropic and ovarian estrogenic hormones should be present in the urine in near normal amounts. However, even with the administration of estrogen, cyclically, vaginal bleeding will not occur and no endometrium will be obtained with a curet.

Congenital Anomalies of Pelvic Organs

Congenital anomalies of the pelvic organs account for more cases of primary amenorrhea than is generally known. Some such condition should be thought of when the initial pelvic examination is being made.

Absence of Vagina. Naturally, the mother of a girl with such an anomaly, which is usually detected early in life, becomes greatly concerned as the girl reaches puberty and becomes interested in the opposite sex. The girl may be normal in every way except for this anomaly and the absence of the menses. Many of these young women experience cyclic menstrual molimen, such as a sense of fullness in the pelvis and distress in the lower abdominal region. The breasts may become full and tender. The related hormones will be found in the urine in amounts within normal range.

The operation for the construction of a vagina may be considered in these girls when marriage is imminent. All concerned should understand the situation and expected result. The McIndoe-Counseller[6] method of treatment for congenital absence of the vagina has proved most satisfactory when the aftercare has been carried out properly. Coitus will help to keep the vagina from contracting.

Anomalies of Uterus and Fallopian Tubes. Anomalies of the uterus and fallopian tubes may be encountered in young women with adequate vaginas when one or both ovaries are functioning normally.

Defective Development or Absence of Ovaries. Rarely, on exploration of the pelvis of a tall, "eunuchoid" type of young woman, no ovaries will be found. No other anomaly may be present.

However, when the ovaries are rudimentary or absent, the usual picture is that of the so-called ovarian dwarf. The histories and the results of physical examinations and laboratory findings in 15 cases reviewed in which the diagnosis was that of ovarian agenesis with dwarfism were strikingly alike. The patients were from 15 to 25 years of age. The average height was 4 feet 7½ inches and the average weight was 101.6 pounds. The breasts were not developed and the external genitalia appeared infantile. Slight amounts of axillary and pubic hair were present in most cases, but no axillary hair was noted in a few cases. All 15 patients had extremely

small, narrow vaginas with small uteri of the infantile type.

Other anomalies were noted in several instances and no doubt hidden anomalies were present in some cases. As is well known, these consist of anomalies of bones, webbing of the neck, coarctation of the aorta, and so forth.

The bone age of this group of patients was from two to six years less than the chronologic age. The basal metabolic rates were within normal range in all cases and roentgenograms of the sella turcica revealed nothing unusual.

In each case the urine contained pituitary gonadotropic hormone in normal or greater than normal amounts and an average of 3.8 mg. of 17-ketosteroids per 24 hours. Estrogenic hormone could not be demonstrated.

Estrogenic hormone given to these patients in a cyclic manner will cause the breasts to develop and will result in withdrawal vaginal bleeding. Axillary and pubic hair will increase in amount. The patients will gain weight and feel better generally. It should be understood, however, by all concerned, that this is only substitution therapy.

Hermaphroditism. Young persons afflicted with hermaphroditism often come to the physician complaining only that they have never menstruated, although they may be fully conscious of their physical abnormalities. One such person who had a distinctly feminine psyche was a male hermaphrodite.

Among the cases reviewed were those of several female pseudohermaphrodites, who also had this complaint. These persons all had a high content of 17-ketosteroids in the urine, the values being from 67 to 123 mg. in 24 hours. They belong to a group in whom adrenocortical hyperplasia is thought to have been present since fetal life, influencing the development of the genital organs. Masculinization is the result.

At present it is agreed that cortisone is the best treatment for this condition. Cortisone may cause the normal female status to predominate and menstruation to occur, provided an anomaly of the female organs does not prevent this.

Dysfunction of Endocrine Glands Secondarily Associated with Menstrual Process

Occasionally, one of the endocrine glands secondarily associated with the menstrual process may be the source of the failure to menstruate. This may stem from faulty development of the secretory cells of the gland or from lack of stimulation from the pituitary. Thus, the thyroid may not function normally, resulting in juvenile myxedema; or hyperfunction or hypofunction of the cells of the adrenal cortex or dysfunction of the islet cells in the pancreas may occur. Diabetes was commonly associated with a failure to menstruate before the advent of insulin and the dietary regimen of the present day.

Pathologic States of the Endocrine Glands

So far, the conditions accounting for a lack of menstruation which have been discussed have had to do with either a lack of development or a delay in the secretory function of the glandular organs, primarily or secondarily associated with menstruation; functional failure of the genital tract or end-organ; or with some congenital anomaly of the pelvic organs in which the process takes place.

In a number of cases of primary amenorrhea, however, the cause will be found to be some pathologic state of the endocrine glands either primarily or secondarily involved in the menstrual process. In the cases reviewed, tumors involved these glands.

Pituitary Tumors (Adenomas) or Other Brain Tumors. Perhaps the pathologic condition that most frequently causes primary amenorrhea is a tumor of the pituitary body or a tumor originating elsewhere in the brain but impinging on the pituitary so as to affect or destroy its function.

It is well known that a chromophobe adenoma of the pituitary may be symptomless for a number of years, aside from the amenorrhea which it causes. If such a tumor develops prior to or coincident with puberty, the absence of menstruation and the lack of development of the breasts and genitalia may be the patient's only complaints for a considerable time. However, a roentgenogram of the head focused over the region of the sella turcica will reveal abnormalities which will explain the symptoms. It is for this reason that a roentgenogram of the sella turcica should be routine for every patient complaining of amenorrhea.

As the secretion of the pituitary gonadotropic hormone is suppressed early in the development of the tumor (the cause of the amenorrhea), none can be demonstrated in the urine and, as a consequence, no estrogen is present.

Two girls, aged 18 and 21, presented themselves at the clinic because they had never menstruated. The diagnosis in each case was Cushing's disease, implying the presence of a basophilic adenoma of the pituitary and the possibility of adrenocortical hyperplasia.

The adrenal glands of both of these young women were explored but were not found to be hypertrophied or to contain a tumor. Later, roentgen ray

therapy was given over the pituitary. The younger girl reported after two years that she felt well but menstruation had not started. The older girl had a second course of roentgen ray treatment after an interval of three months. Her menses appeared after a year and she reported them to be regular at the end of two years.

The amount of 17-ketosteroids was within the normal range in the urine of both these girls. This is probably an important finding in these cases, as it appears to distinguish them from the cases of tumors of the adrenal cortex in which the concentration of 17-ketosteroids in the urine is usually higher than normal, although the symptoms in both groups may be similar.

Other brain tumors, involving or impinging on the pituitary, such as the craniopharyngiomas, prevent the menarche if they have their onset before or during puberty. However, as a rule, the localizing symptoms and signs are present much earlier than with pituitary adenomas and are so predominant that it is easier to account for the lack of menstruation.

Tumors of the Adrenal Cortex. Tumors of the adrenal cortex, developing shortly before or coincident with puberty, prevent the onset of menstruation. Today, such an adrenal cortical syndrome is familiar to physicians everywhere. Usually, the patient or her parents can tell when the characteristic physical signs were first noticed. The moon face, florid countenance, buffalo hump, red striae over the lower part of the abdomen and thighs, plus the masculinizing signs warn the patient that something is very wrong. Hypertension, glycosuria, a larger amount of 17-ketosteroids in the urine than normal and an abnormal outline or shadow in the region of the upper pole of one of the kidneys in the intravenous urogram will help to confirm the diagnosis. Removal of such a tumor may bring the condition of the young woman back to normal and her menses may appear.

Kepler[7] described the clinical characteristics associated with cortical hyperplasia, tumors of the suprarenal cortex, and basophilic tumors of the pituitary most remarkably as long ago as 1939. His descriptions are well worth reviewing.

Ovarian Tumors. The functioning ovarian tumor, which might prevent the onset of the menses should it begin to produce its effects shortly before or during puberty, is, of course, the arrhenoblastoma. It is a rare tumor and I have not encountered one in a girl whose menses were not established.

In a few cases cystic tumors were encountered on pelvic examination and led to surgical intervention. It was felt that they might be the cause of the delayed menses. In each case they proved to be simple cysts. One young woman had a tubo-ovarian cyst which had destroyed the left tube and ovary. It was diagnosed as a congenital cyst, for it was associated with a congenital constriction of the upper third of the vagina. The uterus was reported to be a third of its normal size in spite of what appeared to be a normal right ovary. The function of this ovary was certainly near normal, because the patient's breasts and external genitalia were well developed. Also, 20 rat units of estrogen were present in urine collected during 24 hours. The congenital anomalies of the uterus and vagina rather than the ovarian cyst would preclude menstruation in this case.

Summary

The chief conditions causing primary amenorrhea are related to the lack of functional development of the endocrine glands and the organs primarily associated with the menstrual process.

Congenital anomalies of the pelvic organs prevent a normal menstrual process and often afford an explanation for the patient's complaint of never having menstruated.

The other causes are tumors or diseases of these same primary endocrine glands or those whose function is secondarily related to menstruation.

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Anoxia and the Surgical Patient

Margaret C. Anderson, M.D.

MAN CAN LIVE without water for days, and without food for weeks, but lack of oxygen, the most important single requisite to maintenance of life, is fatal within a few minutes.

Although interest in the subject of anoxia is comparatively recent, there are many clues which indicate that man has suffered from its effects from very early times, even before the dawn of recorded history. In caves of prehistoric periods, the remains of whole families have been found huddled together apparently for warmth, and it is quite likely that the people died from the effects of noxious fumes from fires built in their poorly ventilated homes. Fumes from erupting volcanoes also have caused multitudes to die at one time. Of course, drowning and strangulation occurred, and many legends and folk tales contain allusions to such deaths.

As civilization developed, asphyxia and carbon monoxide poisoning occurred in many of the primitive mines. Fumes from fermenting liquor also added their toll when man began to make spirituous drinks. In the early ninteenth century, attention was drawn to the fact that the symptoms of mountain climbing sickness—palpitation, dyspnea, nausea, vomiting, and muscular weakness—were caused by a reduction of the total amount of oxygen in the inspired air (Clissold, 1823). The participants in the early balloon ascensions also suffered from this, and several lost their lives before the nature of the difficulty was realized and corrected. Of course, neonatal asphyxia has always been with us. Unfortunately, to some extent, it still is.

Although nitrous oxide was discovered by Priestly in 1774, it was not used as an anesthetic gas until early in the nineteenth century. This was made possible by the isolation of oxygen in pure form by Lavoisier in 1777. Modern interest in and understanding of the effects of anoxia have been chiefly owing to scientific investigation aimed at determining the cause of death or morbidity following the use of nitrous oxide as an anesthetic agent. Because of the accompanying anoxemia, seizures were fairly common during the anesthesia, and death sometimes followed its use. Since the patient did not long survive, the cerebral effects and lesions were generally ignored until the late 1930's. In 1939, Courville[1] wrote an excellent monograph describing the pathologic lesions and correlating them with the physical findings in several patients. This did a great deal to stimulate interest and research in the subject, particularly among anesthesiologists and pathologists.

The rapid development of high altitude flying before and during World War II has given the study of anoxia and its related problems the greatest possible impetus. Indeed, many results of studies in aviation medicine are equally applicable to modern anesthesia.

Dr. Anderson practices Anesthesiology, and is on the staffs of the St. Joseph's and Immanuel Hospitals in Mankato, Minnesota.

CLASSIFICATION

The anoxias are usually divided into the following main types after the classification of Barcroft[2] (except number 5, which has since been added):

1. Stagnant. Stagnation is caused by an increase in the circulation time, as in heart failure, shock, dehydration, and so forth.

2. Anemic. Owing to a reduction in the amount of circulating hemoglobin, enough oxygen is not carried to the tissues at all times, as in anemia and carbon monoxide poisoning.

3. Anoxic. The amount of oxygen supplied to the blood is diminished, and the blood oxygen tension is therefore lowered, as in nitrous oxide anesthesia, mountain climbing, pneumonia, mechanical obstruction, pulmonary edema, and respiratory depression from any cause.

4. Histotoxic. A toxic agent may interfere with tissue respiration, as in cyanide poisoning.

5. Combined. Chase[3] has suggested an additional classification because two or more types are usually found together.

The transport of the respiratory gases has been compared[3] with the sailing of a cargo vessel in which the blood stream is the sea and the red blood cells the ships; the hemoglobin molecules are the crew and the oxygen molecules the cargo. At its destination, the tissues, each ship unloads one third of its cargo, oxygen, and picks up new cargo, carbon dioxide, for the return voyage. Thus a constant exchange between the lungs and the tissues supplies a continuous amount of fresh fuel, oxygen, to the tissues, and the waste products of metabolism, carbon dioxide, are hauled away.

Pathology

According to Lucas,[4] the early or primary pathologic change in brain cells is owing to edema. Courville[5] states that the immediate physical effects of severe degrees of anoxemia are hyperemia, edema, and hemorrhage. These lesions are present throughout the body, in mucous membranes, liver, kidneys, gastrointestinal tract, as well as in the brain. The ultimate pathologic changes found in the brain depend on how long the organism survived after the original anoxic incident. Because nervous tissue is more susceptible to anoxia than most cells in the body, the pathologic changes are most marked in it. The newer phyletic areas of the brain are, generally speaking, more sensitive to oxygen deprivation than the older phyletic areas, and consequently the greatest damage is suffered by the higher centers. Typical pathologic findings are areas of perivascular infiltration, vacuolization, and after 24 hours or more, necrosis and, finally, scarring and cyst formation.

Predisposing Factors

Anoxia is often present in patients suffering from cardiovascular, respiratory, or metabolic disease, and it is more likely to develop or increase during surgery and anesthesia. Himwich[6] has compared hypoglycemia with histotoxic anoxia, for the latter is automatically involved in anesthesia. Part of its mechanism interferes with cellular oxidation of the brain. Acute anemia, hyperthyroidism, and hypoglycemia increase the susceptibility of rats to anoxic anoxia, while hypothyroid and infant rats are more resistant.[7] This is also true in humans.

Negro patients are usually likely candidates for anoxia.[8] They are often malnourished, anemic, obese, especially subject to cardiac disease, prone to be apprehensive, and frequently have an unstable nervous system. It is usually possible to detect cyanosis clinically in white patients when 5 Gm. of hemoglobin per 100 cc. exist as reduced hemoglobin. However, it is virtually impossible to discern cyanosis in the Negro because there are many natural variations in color.

The principal causes of anoxia in anesthesia and surgery (except for numbers 7 d and 8, which were investigated later) have been grouped by Waters, Wineland, and Seevers,[9] as follows:

1. A high basal metabolic rate owing to fever, fear, toxemia, and pain.
2. A reduced pulmonary alveolar surface owing to disease or mechanical compression from position (as in nephrectomy and cholecystectomy).
3. Poor oxygen-carrying power of the blood.
4. Cardiac insufficiency.
5. Obstruction of respiration owing to edema, inhaled mucus, fluid or vomitus; laryngeal spasm; and defects in the anesthetic apparatus.
6. Improper anesthetic technique.
7. Respiratory depression owing to a) deep anesthesia; b) high spinal block; c) central depression from morphine, sulphate, or barbiturates; and d) excessive curarization.
8. Shock and head injury.

Schnedorf and others[10] showed that patients with brain concussion, with or without skull fracture, had a depression of arterial blood oxygen from 5 to 44 percent below normal. Oxygen therapy restored the blood oxygen to normal and decreased the marked elevation of body temperature, thus lessening the metabolic need for oxygen, and breaking the vicious cycle. Sedatives, which may cause anoxia, should be avoided in these patients and oxygen therapy instituted immediately. Patients in shock should be treated in the same manner before any corrective surgery is attempted.

Symptomatology

The symptomatology of anoxia can be very confusing, especially with milder degrees of disturbance. Ordinarily, the signs of anoxia occurring during anesthesia are readily recognized by the well-trained anesthetist, but they must be distinguished from those of shock, and of excessive accumulation of carbon dioxide. In early or mild anoxia, respiration is stimulated; the rate and depth increase in response to the effect of oxygen lack on the carotid and aortic bodies. The pulse or heart rate is also increased, owing to a reduction of vagal tone and a slight increase in cardio-accelerator activity. The blood pressure rises and, if the anesthesia is light, the muscles may become spastic (the jactitations of nitrous oxide anesthesia). If the hemoglobin is normal, the skin is commonly cyanotic.

As the degree of anoxia increases, the heart begins to dilate, the systolic blood pressure falls, the venous pressure rises, and there is a marked bradycardia caused by an increased vagal influence. The pulse may show an irregular irregularity (Brace syndrome). Breathing becomes slow and irregular (Cheyne-Stokes respiration). The muscles become very flaccid and the pupils fixed and dilated; the skin is either white or gray. Finally, there is a very rapid fall in blood pressure, the respiratory gasps cease, and the heart stops. Premedication, especially with morphine and atropine, may mask these signs or delay recognition of their onset until it is too late to correct them.[11]

The whole anesthetic regimen should be aimed at preventing anoxia, but should it develop, treatment must be rapid and vigorous if the patient is to survive and escape brain damage. Patients vary tremendously in their resistance to anoxia, but an impaired supply of oxygen to the brain may be fatal in three to four minutes. Great progress has been made in the development of equipment which will enable us to follow the condition of the patient exactly from minute to minute.[12,13] However, for some time to come this equipment will be too expensive and complicated for use in the ordinary hospital. Therefore we must be constantly on the alert for anoxia. Chase[3] says this deadly enemy is today the greatest single hazard to the surgical patient. As Haldane[14] has so aptly expressed it, "Anoxemia not only stops the machine, but wrecks the machinery."

Treatment

Treatment must always be aimed at the cause, but oxygen therapy must necessarily play a part in the treatment of any type of anoxia. In anoxic anoxia, which commonly occurs during surgery and anesthesia, oxygen should be given under pressure to restore the normal alveolar oxygen tension and overcome fatigue of the respiratory center. If a mechanical obstruction exists, it must be removed. Maintaining a clear airway is mandatory, preferably with the use of a large enough intratracheal tube so that the least resistance to respiratory exchange is present. Respiratory and cardiac stimulants such as alpha-lobeline, coramine, and metrazol® are not only useless but also may do more damage by increasing the oxygen demand of the body tissues.[15]

Anemic anoxia demands transfusions, restoration of the blood volume and hemoglobin, as well as oxygen therapy. Many patients admitted for surgery have reduced hemoglobin. Unless the surgery is an emergency, hospital stay will be reduced and postoperative course will be much smoother if this condition is treated before the patient is subjected to surgery. Morbidity and mortality will also be noticeably decreased.

Measures to restore the falling blood pressure, circulation, and cardiac output are necessary for the treatment of stagnant anoxia. For shock and dehydration, saline infusions should be given. Plasma transfusions and/or dextran may be given for a reduced blood volume, unless this reduction is caused by blood loss, in which case whole blood should be administered. Adrenal cortex hormone therapy should be used where indicated, especially in those who have been on cortisone therapy previously, and in the aged and debilitated. If heart failure is present or imminent, the patient should be digitalized using cedilanid® 0.8 to 1.2 mg. intravenously. Oxygen therapy should be started early and continued until the patient is out of danger. Neo-synephrine,® ephedrine or levophed® may be used to bolster the blood pressure until the specific cause of the fall has been corrected.

Histotoxic anoxia requires the withdrawal of the toxic agent, the administration of specific antidotal measures, and oxygen therapy.

A high basal metabolic rate caused by fever should be treated with oxygen therapy, tepid sponges, and colonic irrigations, when feasible. Fear and apprehension may be lessened greatly by giving quiet reassurance to the patient. Toxemia must be treated specifically, and pain can be alleviated with analgesics. Patients with reduced pulmonary alveolar surface, as in pneumonia and pulmonary edema, should be treated for their disease; if anesthesia must be given, a high concentration of oxygen is essential. Procaine hydrochloride administered intravenously (1.0 Gm. in 1,000 cc.) is often useful for arrythmias. Meticulous care in anesthetic technique and high oxygen concentrations are essential for those with coronary disease.

Inhaled foreign material must be removed carefully by suction through the glottis under direct vision. Laryngospasm may be treated by spraying the cords with 5 percent cocaine or 1:100 epinephrine, or by injecting 5.0 to 15 mg. of curare intravenously. If these methods fail, forced expiration by manual compression of the chest will often be successful. Intubation may be forced if necessary.

When respiratory failure ensues during high spinal anesthesia, oxygen should be given under pressure. The blood pressure should be supported until consciousness, adequate respiration, and blood pressure are restored. When deep anesthesia is the cause of respiratory failure, these same measures

should be taken, but the anesthesia should also be lightened. Central depression from any cause should be treated by artificial respiration, preferably with a breathing bag, and by giving 100 percent oxygen through an intratracheal tube, until the patient recovers. Excessive curarization should also be treated this way, and 1.0 to 2.0 cc. tensilon chloride should be given intravenously if the product used was a natural curare product as opposed to a synthetic one. Acute cardiac standstill should be treated with immediate cardiac massage, preferably through a chest opening, and 100 percent oxygen should be given under pressure.

"Life begins with anoxemia and ends with anoxia. It is anoxemia in the newborn that causes the first inspiratory gasp with which life begins, and it is anoxia that lulls life's last effort in death." (Chase[3])

Summary

A brief review of the history, pathology, classification, and symptomatology of anoxia has been presented, together with some specific suggestions for its treatment. Its constant threat is emphasized and its prevention stressed.

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Medical Uses of Radioisotopes

James L. Born, M.D.

Following the Curies' discovery of the radioactivity of uranium in 1896, there was a lapse of 27 years until the first biologic tracer studies were done by Hevesy[1] in 1923. These first studies made use of radioactive lead to investigate the absorption of that element by plants. The first tracer studies on humans were done a few years later in 1927 by Blumgart and Weiss[2] by injecting a minute quantity of radium B into the antecubital vein to study the rate at which it arrived in the other extremities. In these early days the usefulness of radioactive isotopes was greatly limited by the fact that the only available ones were those of radium and other naturally occurring radioactive elements with long half-lives, and, therefore, only minute amounts could be used. In 1934, the Joliot-Curies[3] discovered that by nuclear bombardment they could make into radioactive form elements which did not normally emit any form of irradiation. Shortly after this the cyclotron was developed in Berkeley by E. O. Lawrence and his associates, and this and other types of particle accelerators made it possible to create radioactive forms of all the stable elements. By 1940, some 370 varieties were known. During the war the atomic pile was devised which further facilitated the large scale production of radioisotopes and made them readily available for scientific use so that by 1947 the increased supply of radioisotopes permitted allocation for research in all fields. Thus, the widespread use of radioisotopes is of very recent origin, and we can expect that the accomplishments of its pioneers in the fields of biology and medicine will soon be viewed from the light of future important developments.

The use of radioisotopes in medicine has opened three broad pathways of exploration into the fields of diagnosis, treatment, and research. A comprehensive review of the knowledge obtained in these fields is no longer possible because of the large number of isotopes available and the vast amount of work done. Therefore in the short time allotted it becomes necessary to touch briefly on the high lights in these three branches and the more important uses of the isotopes.

Since research has brought about the practical application of radioisotopes in clinical medicine and given us tools for diagnosis and provided new forms of therapy, the place of radioisotopes in medical research will be considered first. Their most important research application is in tracer studies, where the isotope serves as a "tag" which can be followed in its course through various stages of metabolism in the organism. The isotopes of primary value are those of the elements essential to life, namely, hydrogen, carbon, sodium, phosphorus, sulfur, chlorine, potassium, calcium, iron, cobalt, copper, zinc, and iodine.

For administration to human beings, only isotopes with a suitable half-life or excretion rate, or a combination of these two (expressed as the biologic half-life), may be used. Radioactive isotopes which deposit in tissue and remain for long periods of time are undesirable because of the production of long term irradiation effects and the possibility of the development of malignant degeneration. Suitable isotopes of elements essential to life are used in these tracer studies. Certain of them can be used alone but more commonly are incorporated into compounds prepared in either of two ways, 1) by synthesis into organic compounds, or 2) by biosynthesis in animals, plants, or microorganisms in the course of normal metabolic processes. By this latter method the isotope is administered in a simple form and isolated as a labeled metabolic product, which can be purified and used in further research.

Once a compound is labeled, it can be administered and followed through the body by various methods. External counters can be placed over the appropriate body surface, the in vivo method. Pictures resulting from the deposition of the labeled compound in sections of tissue can be obtained by radioautographs, which are made by placing these sections on unexposed x-ray film. Rates of excretion may be measured in the breath, feces, or urine. This gives us new insight not only into the fate of the compound but also into human metabolic processes, and opens a new field in human physiology by which we can understand many things which take place within the body both in health and in disease.

Dr. Born is Associate Physician, Occupational Health and Radiation Safety, Cowell Memorial Hospital, and Associate Physician, Donner Laboratory, University of California. *This paper was presented at the Annual Meeting of the American Medical Women's Association, June 20, 1954.*

In addition to metabolic studies, important contributions to the understanding of human physiology which have resulted in an extension of our knowledge, and have a practical application to clinical medicine, are found in circulatory physiology, the study of body compartments and body volume. In circulatory physiology, methods have been devised at the University of California whereby the flow of blood to the liver can be measured. This is accomplished by venous injection of P^{32}, labeled chromic phosphate; since this material is removed by the von Kupffer cells of the liver, a determination of the radioactivity of serial blood samples and its rate of removal can be used in the computation of flow of blood to that organ. Other studies have yielded new methods of determining cardiac output, perfusion of blood to muscle, and other useful physiologic means of obtaining information of importance for therapy.

Study of body components is also possible through tracer techniques, one being the use of tritium to determine total body water. This method when used with a gas displacement method of determining total body volume offers the basis for determining total body fat and lean tissue mass. Potential medical applications are in management of weight reduction and in the control of patients with cardiac disease.

C^{14} has been used to label steroids, drugs, and vitamins so that where the isotope can be followed throughout the body either alone or attached as a chemical or biologic tag to a substance tolerated by the body, their metabolism can be effectively studied. Many interesting results are obtained. For example, work on a recent project at the University of California Medical School on codeine conversion[4,5] disclosed that when codeine is taken into the human body, a part of it is converted to morphine. As yet it is not known how quickly or how much of the codeine is converted. A project of this nature requires not only the synthesis of labeled compounds, in this instance codeine with a C^{14} tag, but also adequate animal research, and eventually research on human subjects with counting of breath, and urine and feces samples.

One of the most hopeful prophecies concerning the use of radioisotopes in medicine is that a labeled substance may be found which would provide the basis for an effective cancer test. This potentiality exists because cancer cells have a metabolism different from normal cells and require certain compounds in greater quantities. If some radioactive compound can be discovered for which cancer cells have an affinity, diagnosis of certain cancers will be simplified. This and other approaches are being pursued actively at the present time.

In the field of diagnosis, isotopes have taken their place along with conventional laboratory procedures and isotope laboratories are now familiar facilities in most parts of the country. P^{32} has been of especial importance in the determination of blood volume in the blood dyscrasias as it offers a more reliable index than the hematocrit. Red cells from the patient are incubated for two hours with an isotonic solution of radiophosphate during which period 40 percent of the labeled phosphate will enter and label the red cells. By reinjecting this sample back into the patient, it is possible to determine the blood volume by the simple dilution technique, comparing the counts of the diluted phosphate labeled red cells with the standard. Then with the aid of the hematocrit, total blood volume may be determined. After doing many of these studies, it is striking to note that the red cell count does not give us an accurate picture of the red cell mass or the plasma volume. In the control and handling of patients with polycythemia vera, it is essential to do red cell volumes and not depend on red blood counts and hematocrits.

Another important isotope in the study of blood dyscrasias is Fe^{59} which is both a beta and gamma emitter. This isotope has been used extensively for the study of iron uptake in the red blood cells and in plasma. It also affords a valuable means of determining iron turnover in the body and sites of extramedullary hematopoiesis.

Iodine uptake studies are commonly used in patients with thyroid disease. By administering a known tracer amount of I^{131} and counting over the thyroid gland after a stated period of time, one can obtain an accurate estimate of the activity of the thyroid in cases of hyperthyroidism. This has been an important diagnostic advance which has supplanted the basal metabolism determinations. In cases of carcinoma of the thyroid, other areas of the body can be counted to determine the presence of metastatic lesions having the capability of taking up iodine. An interesting scanning device for surveying the entire body of a patient suspected of having metastatic lesions has been developed at Donner Laboratory. This instrument, by scanning and counting a patient, and reproducing the counts in forms of visible flashes of light seen by a camera, produces a pictorial representation of the distribution in the human body of administered gamma emitting isotopes. Our scanner has confirmed thyroid metastases in 4 of 14 patients studied here. In 3 patients metastases were located in the chest region. In the fourth patient they were at various points, the pelvis, chest, elbow, and jaw; these

metastatic lesions were visible by the scanner long before they became visible on x-ray film. Determining the location of metastases in these patients is an aid in the diagnosis of their condition and will aid in indicating whether or not further surgery, roentgen therapy, or therapy with radioactive isotopes is needed.

Radioactive diiodofluorescein synthesized with radioiodine has provided a diagnostic aid in the preoperative diagnosis of brain tumors. After this solution is injected intravenously, the uptake in the brain is counted externally and diagnosis made by comparing this reading with normal values for corresponding areas. The vascularity and cellularity of the tumor is readily demonstrated by its affinity for radioactive dye and allows some degree of differentiation of the tumor before surgery. Metastatic carcinomas and sarcomas give counts of the highest range, next are the glioblastomas and vascular cellular meningiomas. The astrocytomas show the lowest differential counts because of their relative avascularity. Radioactive iodinated human serum albumin has also been used for the same purpose but necessitates certain refinements in techniques. These are only a few of the diagnostic possibilities obtainable with radioisotopes. The combination of man's ingenuity with greater experience and knowledge will extend these beyond our present imagination.

In medical treatment, the value of isotopes lies in their power to deliver a dose of radiation to a given site either by selective localization in tissue or deposition. The isotopes most widely used are P^{32}, I^{131}, and Au^{189}. P^{32} has achieved a recognized place in the treatment of polycythemia vera and the chronic leukemias. Indeed, it is now considered the treatment of choice in polycythemia vera.

The early investigations of the use of P^{32} in leukemia, and later polycythemia vera, were the contribution of John H. Lawrence,[6,7] the Director of Donner Laboratory, who realized that the therapeutic application of radioactive phosphorus lay in its selective power of irradiation to the bone marrow and rapidly growing tissue. Before clinical trial on humans was attempted, he carried out extensive studies on mice with leukemia and found that about 15 percent of these animals survived moderate doses of P^{32} and were rid of their disease. This was a surprising result as he was unable to demonstrate any selective sensitivity of the tumor cells and leukemia blood cells over the normal cells. Thereafter, in his first clinical trials on patients who were hopeless cases of acute leukemia or terminal chronic leukemia, he found that P^{32} when given in a soluble form did become concentrated to a relatively high degree in rapidly growing leukemic tissue and in bone marrow with a very high uptake in the body of from 60 to 80 percent. Considering both excretion and decay, it was determined that a millicurie of P^{32} in the body would deliver through its life in the body about 610 roentgens of radiation, which gave a guide to dosage with this material comparable to doses of x-ray given to leukemic patients in terms of roentgens of radiation to various tissues. While dosage varies considerably from patient to patient, in general they have approximated a total body irradiation of from 10 to 200 roentgens. The end results of treatment, while not a cure, are better than those reported from other forms of therapy. In terms of prolonging the comfortable and useful life span, P^{32} treatment is indeed of much greater value. In addition the lower cost to the patient as compared with roentgen therapy and the freedom from radiation sickness are definite advantages.

In polycythemia vera the results of therapy with P^{32} are more satisfying. These studies were begun in 1939, three years after the work with leukemia was started. They were started because 2 patients had such poor veins that they could not be bled. Furthermore it seemed logical to use P^{32} because of the selective localization in the marrow. These patients' symptoms were relieved and the blood picture kept at near normal levels for over 10 years. Since that time over 150 patients with polycythemia vera have been treated with P^{32} at Donner Laboratory, being given one or more doses of 3 to 5 millicuries orally or intravenously as infrequently as every three years. A four to six week period may be required before remission occurs after therapy. One of the patients treated during the first year is still alive 15 years later. P^{32} soon came to be recognized as the treatment of choice in polycythemia vera and has been used wherever P^{32} was available. Low-Beer[8] reported that of 284 patients treated with radiophosphorus, 85 had remissions up to 7 years. In our 201 patients, the 5 year survival rate is 93 percent and the 10 year survival rate is 70 percent.

A further application of P^{32} in therapy is its use in the therapy of superficial skin cancer by placing it on a small absorbent blotting paper cut to the size of the lesion. The beta rays will penetrate only a few millimeters of tissue, so that over a 72 hour period, 5,000 to 10,000 roentgens may be delivered to the tumor. The results as reported by Low-Beer are comparable to roentgen therapy or surgery. P^{32} has also been used in the therapy of lymphosarcoma, Hodgkin's disease, and multiple myeloma, but its

value has not yet been established definitely.

Radioactive iodine has achieved its place in the treatment of hyperthyroidism and serves as a useful adjunct in the therapy of carcinoma of the thyroid in carefully selected patients who cannot be helped by the well-established methods of surgery and roentgen therapy. Its usefulness lies in cases in which there is roentgen ray, histologic, or other concrete evidence of extension or metastases outside the area which can be treated surgically. The principal limitation to the value of I^{131} in these cases is that not all thyroid cancer tissue will take up I^{131} and these cases will not be benefited. The ability to take up iodine depends on the degree of differentiation of the tumor tissue; it can be said that the more nearly thyroid cancer tissue resembles normal thyroid tissue, the more promising the results are likely to be. In some cases where the metastatic carcinoma takes up iodine poorly, preparation may increase iodine uptake and hence increase the possibility of benefit from I^{131}. This preparation can take the form of 1) thyroidectomy, which is believed to unleash pituitary production of thyroid stimulating hormone (TSH) so that this hormone will stimulate functioning metastases to pick up I^{131}; 2) the administration of TSH in daily doses of 25 mg. for five to eight days; 3) prolonged administration of large doses of thiouracil®, usually 1.5 Gm. per day until the maximal effect is achieved. There has been no definite establishment of cure rates from I^{131} and only after some years can this be evaluated.

Radioactive colloidal gold has also had wide usage in cancer therapy. It is used in three different ways, depending on the route of administration.

1. Interstitial injection: This has been used extensively in certain cases of carcinoma of the prostate by direct injection into the prostate after the bladder is opened. When radiogold colloid is injected directly into a tumor, it usually stays in or near the injection site with only negligible quantities traversing via the lymphatics or blood stream to the liver or spleen. Again, however, patients must be carefully selected as surgery is still the therapy of choice and the use of radiogold is reserved for the inoperable cases where the disease has extended beyond the confines of the prostatic capsule but in which there is no evidence of distant metastases. Several hundred patients have been treated in this way by Flocks, Elkins, and Kerr,[9] of the University of Iowa group, with promising results. In general the tumor mass disappeared within three weeks and transurethral biopsies at the end of the third month after therapy showed no evidence of tumor in about one third of their cases. Probably the most important subjective effect was relief from bladder neck and urethral obstruction. Final evaluations will again be achieved with the passage of time. The direct injection method has been used with varying degrees of success in other types of tumors such as ovarian carcinomas.

2. Intracavity injection of radiogold: A large number of patients have metastatic tumors involving the peritoneum or pleura causing rapid formation of fluid. These patients suffer almost as much from the fluid accumulation and the discomfort of repeated thoracenteses and paracenteses as they do from the effects of the disease. Radiogold colloid when injected intrapleurally or intraperitoneally adheres to the pleura or peritoneum with only a small amount being carried to the regional lymph nodes. As a result of therapy, the appearance of the fluid may change from bloody to clear, tumor cells may disappear from the fluid, and in a significant number of patients there will be complete cessation of fluid formation. While the use of radiogold may not prolong life, it increases the comfort of the patient by its effect on fluid formation and is believed superior to roentgen therapy in this respect.

3. Intravenous injection of radiogold: This has been used in a series of cases of chronic leukemia but offers no advantage over P^{32}.

In the few years since radioisotopes have been available to medicine much has been attained, but our enthusiasm makes us impatient with our accomplishments, and we must realize that the limitations to the application of radioisotopes in medicine lies also in our own inadequate knowledge in the sciences basic to medicine.

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Fifth International Congress On Mental Health

THE FIFTH INTERNATIONAL CONGRESS on Mental Health was held in the University Buildings at Toronto, Canada, from August 14 to August 21, 1954. The Congress was held under the auspices of the World Federation for Mental Health, and the sponsoring host organisations were: Canadian Mental Health Association and Canadian Psychological Association.

There were some 2,000 members, representing almost every discipline concerned with human relations: psychiatrists; psychologists; psychiatric social workers; teachers and educationists; ministers of religion of many denominations; lawyers, magistrates and judges; anthropologists; legislators; industrialists; and many others. There were delegates from some fifty countries and a large contingent from Great Britain. The medical members from Great Britain included the Hon. Walter Maclay, representing the Mental Health Department of the Ministry of Health; Dr. Alford of the Special Services Department of the Ministry of Education; Dr. J. R. Rees, medical director of the World Federation for Mental Health; Dr. Kenneth Soddy, assistant medical director of the World Federation for Mental Health; and Dr. Doris Odlum, president of the European League for Mental Hygiene, who acted as the official delegate for the British Medical Association and conveyed the good wishes of the Association for the success of the Congress. Some fifty medical women attended the Congress.

The proceedings were divided into plenary sessions, technical sessions, and round-table discussion meetings. Prior to the Congress itself there were three research symposia dealing with problems of partnership in mental and public health; mental health and child development; industrial mental health and human relations; and alcoholism. These research symposia paved the way for the main theme of the Congress which was Mental Health and Public Affairs.

The International Institute on Child Psychiatry held a two day Congress on August 13 and 14 and the First International Congress on Group Psychotherapy took place on August 12 and 20; both meetings were held in association with the main Congress on Mental Health.

The inaugural meeting was opened by the president of the Congress, Dr. Sidney Smith of Toronto, who welcomed the delegates warmly, and brief responses were given by delegates from each of the six continents. The principal address was given by the Hon. Paul Martin, Minister of National Health and Welfare of Canada, on "The Challenge to Mental Health in the World Today." He stated that mental health was a problem of the first magnitude in Canada. There were more than 65,000 patients in Canadian mental hospitals and mental illness accounted for more lost working time than tuberculosis, cancer, and poliomyelitis combined. Prejudice and ignorance about mental diseases still constitute a formidable barrier to progress. Since a national mental programme was instituted in 1948, more than 10,000 new beds had been provided in mental institutions and there had been a rapid increase in the number of mental clinics and mental health staffs. Federal expenditure on medical research now amounted to more than $500,000 annually and more than $30,000,000 had been provided for all work in the field of mental health since 1948. There was an apparent increase in mental illness throughout the world in the past two decades but this might well be owing largely to improved diagnosis and greater public understanding of emotional disorders.

The first plenary session held on Sunday evening, August 15, had as its subject "Mental Health and Spiritual Values." The speakers were Sir Geoffrey Vickers, V. C., of London, and Dr. Leonard W. Brockington of Toronto. Sir Geoffrey discussed the various philosophies which man had evolved from the earliest times and said that it was obvious that all human beings fundamentally felt the need for some spiritual value. In order that life should be tolerable, it must hold some meaning and purpose beyond the purely material. This was the only enduring incentive and the only ideal through which man could attain to true mental health.

On August 16, Professor Rumke of Holland, president of the World Federation for Mental Health, spoke of "The Solved and Unsolved Problems in Mental Health," and Professor Malamud of Boston dealt with "Research in Relation to Schizophrenia." On August 17, Dr. Ronald Hargreaves, chief of the Mental Health Section of the World Health Organisation, discussed "Mental Health in Relation to Public Health." He pointed out that once the medical profession had discovered something of the causation and nature of a disease, it then became the function of the public health authorities and of the community in general to take preventive action. In regard to many of the problems of mental health, enough was already known to enable preventive action to be taken by the community and it was for them to take up the challenge where the doctors had shown the way.

On August 19, Dr. El Kousey of Egypt spoke on "Mental Health in Education in a Changing World." He felt that the orthodox methods of education were producing a race of people who were unable and unprepared to face the practical issues of life. He advocated adding a course on human relations to the school curriculum. Mrs. Eleanor Roosevelt then spoke on the individual citizen's responsibility in mental health.

On August 20, Professor Ozeretsky of Leningrad, U.S.S.R., read a paper on "The Development of Child Psychiatry in Russia," and Dr. G. Brock Chisholm of British Columbia, lately Director-General of the World Health Organisation, spoke on "Some Health Frontiers that Need Attention."

On August 21, there was a special session at which three Russian delegates gave papers on "Various Aspects of Mental Health in the U.S.S.R."

During the mornings, the various technical sections discussed a wide programme of subjects of a more technical character, including "Factors in the Distribution of Mental Disorder and its Epidemiology." Dr. A. T. M. Wilson and Dr. Tredgold took part in a discussion on "Industrial Mental Health and Human Relations," and gave a report on the symposium on the subject. Dr. Maclay spoke on "Community Health Services," and Dr. T. P. Rees on "Hospitalisation Policies and the Rehabilitation of Patients." Problems of the aged citizen and of alcoholism and drug addiction were also dealt with.

Technical Section B dealt with the mental health of children and youth. Dr. Mary Burbury took part in the discussion on "Mental Health Needs of Early Childhood," and other aspects discussed were mental health in education; the mental health approach to teacher education; special mental health needs of handicapped children, mental and physical; and Dr. Alford gave a paper on "The Mental Health Aspects of Mental Deficiency."

Section C dealt with mental health in government activities, including mental health and technologic change; mental health problems in the changing East; mental health problems of migration of refugees; mental health in the administration of justice; juvenile delinquency; and mental hazards in penal institutions.

Section D discussed the function and organisation of mental health societies. Dr. Henry Dicks gave an interesting paper on "Protection of the Integrity of the Family." He said that marriage brought to the surface more latent mental instability than war, and many people who appeared socially and industrially capable broke down in their marriage relationships. It was essential to keep the family as the unit of community life. He emphasised the place of the father in the home and felt that the importance of his relationships with the mother and the children had hitherto failed to be taken adequately into account. It was his reactions which largely decided the mother's attitude towards both her home and her children.

Dr. J. R. Rees and Dr. F. Calderone of the United Nations, New York, spoke on the "Relationship of the Voluntary Mental Health Society to International Governmental Agencies," and pointed out how valuable was the advisory role of voluntary organisations in relation to government bodies such as WHO and UNESCO.

Section E took biologic adaptations as the topic for discussion, and Dr. Hans Selye, Montreal, gave a paper discussing his theory of the "General Adaptation Syndrome in Its Relation to Mental Health." Psychosomatic illness was also discussed by Dr. Eric Wittkower, Montreal, and Dr. Carlos Sequin of Peru, among others. Other subjects were learning and psychotherapy, and operative factors in effective therapy, in which Dr. Aubrey Lewis took part as chairman of the panel.

The round-table discussions included the importance of the teacher in mental health; mental health problems and human relations in the classroom; and "Is Teaching a Hazardous Profession from the Mental Health Standpoint?"

Round Table B dealt with parent education, its aims and objectives.

Round Table C considered the role of the volunteer worker in mental health.

There was an interesting programme of mental hygiene films dealing with such subjects as childhood; group psychotherapy; mental illness and treatment; and the cultural and social issues.

The Seventh Annual Meeting of the World Federation for Mental Health was held on Tuesday, August 17, when Dr. Frank Fremont Smith, director of the Josiah Macy Jr. Foundation of New York was inducted as president for 1954-1955. Dr. Henry Dicks was elected as an alternate member of the executive. Prof. Dr. F. K. Gokay, Governor Mayor of Istanbul, Turkey, conveyed an invitation to the World Federation to hold its next annual meeting in Istanbul, probably in the autumn of 1955. This invitation was accepted.

At the closing session of the Congress, on August 22, Dr. J. R. Rees, director of the W.F.M.H., said that maintaining mental health was one of the most important contributions to world peace. A mentally healthy nation would be mature and well-balanced enough to be able to understand the problems of other nations without animosity. He felt that the Congress had been of much more scientific value than previous meetings. It had abundantly served the purpose of making valuable personal contacts between peoples of all races, creeds, and disciplines. He believed it would prove a stimulus to all those who had participated in it and would encourage them to return to their homes and spread the gospel of mental health.

Reported by DORIS M. ODLUM, M.A., M.R.C.S., L.R.C.P., D.P.M.

Sixth International Cancer Congress

THE SIXTH INTERNATIONAL CANCER CONGRESS of the International Union Against Cancer met in Sao Paulo, Brazil, July 23 through 29, 1954. Sao Paulo was celebrating its fourth centennial with pioneering vigor. Congress meetings were held at the Palace of Industry, one of the Centennial Exposition buildings. As the exposition opened in October, the buildings were not yet completed. The astounding progress noted daily inside the buildings and outside in landscaping seemed typical of this "fastest growing city."

Congress meetings were held on the fourth floor of the Industrial Palace. Space for large and small groups was ample. Linguaphones were used in the large auditorium, translations in the smaller auditoriums. In international meetings many people try to speak English even though it is not their native tongue. The Women's Committee were on duty at the information booth and helped in many ways. They planned delightful sightseeing trips for women attending the Congress. These included orchid gardens and a coffee fazienda. Buses and limousines were available to and from the Congress.

The Congress was opened by the Governor of Sao Paulo. The hundred foot stage was banked with pink camelias and orchids. About 1,500 attended, representing 47 countries. The largest number were from Brazil, with the United States having the second largest group.

The program was arranged for panel discussion of major types of cancer, with lectures by invited speakers and symposia on prevention, clinical stages, geographic pathology, nomenclature, cancer in children, teaching, advanced cancer cases, and nutrition. These symposia were, for the most part, under the sponsorship of groups working permanently in these fields. Another section was for papers volunteered by individuals, including biology and histochemistry, enzymes, tissue culture and cytology, hormones and experimental chemotherapy, carcinogenesis, viruses, and radiology. There was a hall for movies. There were no scientific exhibits.

As chairman of the International Union Against Cancer's committee on Tumor Nomenclature and Statistics, I did not have time to listen to many of the papers. My committee had a panel meeting, a committee meeting, and two symposia. No one can cover completely the programs of any big medical meeting. Committee work and personal contacts are as important a part of meetings as papers and are seldom reported.

The committee on Tumor Nomenclature and Statistics began in 1950. It finished its major tasks at this Congress and was, at its own request, adjourned. This committee was divided into panels for its main projects of nomenclature of tumors in humans, nomenclature of tumors in animals, clinical stages of accessible cancer, atlases, and statistics.

(Continued on page 21)

Alaskan Interlude

Catherine Burns, M.D.

ALASKA, America's last frontier, has certain medical problems not encountered in the continental United States. I became acquainted with some of them when I spent six months in Fairbanks during the winter of 1948 to 1949. I had always been interested in Alaska, and so when the chance came to visit the territory between changes of location in Minnesota, I seized the opportunity.

I happened to arrived in Anchorage during the annual meeting of the Alaska Territorial Medical Association. Visiting with some of the doctors, it did not take long to learn that a number of positions were available both in private practice and in the United States Public Health Service. One of the doctors in Fairbanks was most anxious to get an assistant, and I accepted the position.

Fairbanks was a typical Alaskan town with a population of about 9,000 in the winter and 15,000 in the summer. It is located in the "golden heart" of Alaska about 100 miles south of the Arctic Circle and 418 miles from Anchorage, the nearest city on the coast. Gold mining is still the most important local industry and several large military bases are located there. There were five doctors in the town, one of whom was nearly retired from active practice. This meant that all were very busy as they had to care not only for the local people but also those in the surrounding territory of several hundred miles.

St. Joseph's Hospital, run by the Catholic nuns, served Fairbanks and all of interior Alaska also. All of the basic services were available here, but any unusual cases had to be sent to the States to specialists. Needless to say, such a long expensive journey kept consultation at a minimum and forced me to undertake a number of procedures I would rather have sent to specialists.

Dr. Burns is in general practice and is Vice-President of the Naeve Hospital staff, Albert Lea, Minnesota.

Both clinics in town had good x-ray equipment, and the hospital had a portable unit. A medical technician was employed by the hospital, and a laboratory and x-ray technician and a registered nurse were employed by the doctor I assisted. We also had an electrocardiograph, a basal metabolism machine, and a diathermy unit. All the usual drugs, serums, and antibiotics were usually available, and if not, could be obtained from Seattle in 24 hours if necessary. It is interesting to note that during my six months in Alaska, only two drug house detail men came to town.

The population of Fairbanks is largely white, but there are quite a few Natives, as the Indians are called, and some Eskimos who were brought in during World War II to work on the railroad. The Eskimos lived in a quonset hut village nearby. The Alaskan Railroad runs from Fairbanks to Anchorage and Seward and, until the Alaskan Highway was completed, it was the most important ground communication between the biggest cities in the territory.

Aviation is very important to the territory. There is more flying per capita done there than anywhere else in the United States. Many patients were flown in from distant spots for treatment at the hospital. While I was in Fairbanks, all United States shipping was stopped owing to strikes, and so practically everything came by air. This even included the grand piano for the concert series inaugurated that year!

I had anticipated that treatment of frostbite and pneumonia would be a large part of a general practice in the winter. However, very little of either is seen as the people dress like the Eskimos do, in fur parkas. Babies are a booming business up there. The old-timers like to say this is because of the long winter nights! It was hard for me to get used to the short hours of daylight in the winter with sunrise about 11 a.m. in November and sunset occurring when I went home for lunch! Of course, the midnight sun in the summer helps to compensate a bit for this.

Tuberculosis is still a serious problem in the territory. The Public Health Department was engaged in an extensive BCG vaccine program among the Natives and Eskimos. Case finding among the Eskimos is made difficult by their intense family devotion. They frequently will conceal a sick grandmother or a child to prevent their being taken away to a sanatorium for treatment.

While at Anchorage, I was fortunate in being able to attend some of the sessions of the Crippled Children's Clinic. There were so many cases of bone tuberculosis that the Orthopedic Hospital in Sitka had a long waiting list. The older children frequently were sent to Seattle, Portland, or Chicago for treatment. Very few cases of polio have occurred in the territory and rheumatic fever is much less of a problem there than it is here.

The long cold winters have a definite effect on a doctor's practice. The isolation and the cold seem to precipitate more psychiatric problems than in a general practice in the States. The extreme cold is made tolerable in Fairbanks by the almost complete absence of wind. Nevertheless, 40 below is cold even without the wind, and I could not blame the people for wanting more house calls in the cold weather. Beyond minus 45, the atmosphere congeals into the ice fog which makes driving quite hazardous. Visibility is reduced just as in a ground fog.

Alaska is beautiful in the winter. The snow fell whenever the temperature warmed up to 20 below or higher, and it seemed to stay clean. It never did melt much, so that by the time I left in March, it was three feet deep on the level. This keeps the people busy shovelling off their roofs to keep them from caving in with the weight. Most of the homes were still of log cabin construction and many of the nicest homes were made of logs.

I had the use of a jeep and this was quite a handy car. My chief difficulty proved to be flat tires. The synthetic tubes still in use then did not stand the cold very well. During January and February, I had an average of one flat tire a week because every time the temperature went down to 40 or 50 below zero another tube would crack open. Ice in the gas line was the other persistent troublemaker. The four wheel drive made the jeep a very useful car on the ice and often got me out of snowy spots.

Winter sports were not popular except in October and March as it was too cold during the rest of the winter months. However, everyone enjoyed the dog team races held every Sunday afternoon on the Chena River. The dogs ran best at 20 below, the drivers said, so at least they were satisfied with the temperature most of the time.

The big event of the winter was the annual winter carnival held the first week end in March. Dog teams came from all over the territory, and there was a parade, a queen, and all the usual entertainment. The dog team races were the main event, and they were held for three days. Twenty teams were entered the year I was there, and the combined howling of the dogs woke up the town each morning. Most of the teams were flown in by plane a few days before. Since we had an unusually warm spell that year with the temperature up to zero, some of the dogs did not run well, especially those from Point Barrow.

There is no doubt that medical practice is a bit rugged in Alaska, but it is also a challenging and rewarding experience. There were several women doctors in the Public Health Service in Juneau, but I was the only one in private practice in the territory that winter.

Most of the patients are young people, and the few old-timers are usually pretty healthy. Accidents comprise a large part of general practice as would be expected in any frontier community. Since the territory is growing, both in population and in importance from a military standpoint, Alaska will continue to need the services of many more physicians in the years to come.

NELLIE N. BARSNESS, M.D.
Guest Editor

We welcome Dr. Nellie N. Barsness, Guest Editor of the Branch Twenty-Six issue of the JOURNAL. She is past Regional Director for the Northwest Central Region of the AMWA, and a past president of the Minnesota Branch.

Not long ago she was awarded a Fifty Year Club certificate by the Minnesota Medical Association for having practiced medicine for more than fifty years. She has pioneered in many things, including the use of x-ray equipment. She served as ophthalmologist with the French Army in World War I. Her studies have also included otolaryngology and dermatology, of which she has made good use in her general practice.

In this number, the articles and material from Minnesota were collected by Dr. Barsness.

History of Branch Twenty-Six

Nellie N. Barsness, M.D.

In pioneer Minnesota, the women's activities were like a young tree with four sturdy branches: 1) health problems, 2) security for the helpless, 3) Women's Suffrage Association, and 4) the Women's Christian Temperance Union.

These branches were trimmed, pruned, and even grafted together, with trained nursing. Numbers 1 and 2 soon became productive, numbers 3 and 4 were not doing so well. There were congenital troubles and attacks of allergy. Experts were baffled. Years rolled by. Promising symptoms were replaced by relapses. After many decades, however, hope came oftener and relapses were few. Finally, in 1919, cure was established. By faith, courage, and perseverance, branches 3 and 4 were trained into productive activity. New branches, even twigs, are parts of these sturdy branches.

* * *

By 1882, Minneapolis, Minnesota, was a thriving city with a fast growing population. Hospital facilities were limited, more hospitals were needed. Forty-three leading women organized the Hospital Association, elected board members, and adopted a constitution and by-laws. Seventeen days after the first meeting of the founders, the first patient was admitted to the Hospital for Women and Children, which was managed completely by women.

In 1883, Minnesota instituted the licensing of physicians wishing to practice within its boundaries. Dr. Mary Whetstone, in a group of seven women, was licensed at that time. She was the first woman doctor appointed to the staff of the Asbury and the City Hospitals, the second to locate in practice in Minneapolis, and the first elected vice-president of the State Medical Association.

Dr. Martha Ripley, arriving in 1883, recognized the lack of pregnancy and childbirth care for destitute expectant mothers and for young girls facing the tragedy of unmarried motherhood. With full support of friends and associates, Dr. Ripley founded the Maternity Hospital in 1886. Her practice became one of the largest in Minneapolis. She was called on to give lectures in obstetrics and pediatrics at the medical colleges of Wisconsin, Michigan, and Iowa. She accepted a professorship in pediatrics in the Homeopathic Medical School, later a part of the University Medical School.

The women doctors were active in suffrage work and were interested in bills before the Legislature that concerned women and children. Through Dr. Ripley's unfaltering efforts, the "Bill of Consent" was changed from 10 years to 18 years.

Dr. Addie Haverfield volunteered and served as nurse in the Spanish-American War. After the close of this war, Dr. Bessie Park Haynes was appointed by the governor to place the war veterans, ill with typhoid fever, in the Minneapolis hospitals.

Dr. Alcinda Auten Pine located in St. Paul in 1884. She was a pioneer in the use of the Murphy button. She treated delinquent girls for the St. Paul health department for decades of years without remuneration. She was active in civic clubs, held office in the county medical society and often served as officer in the Medical Women's Association of Minnesota.

Dr. Annah Hurd, Dr. Adelle Hutchinson, and Dr. Margaret Koch each served for six years on the state board of medical examiners.

More women doctors were locating in Minnesota; a few selecting the larger towns, such as St. Paul; the largest number, however, in Minneapolis. Transportation was by private horse and buggy for the many house calls. Many of the pioneer medical doctors were ex-schoolteachers. They invested in postgraduate medical studies at home and abroad. There were graduates from Boston Medical College, Michigan University, and the women's medical colleges at Chicago and Pennsylvania.

In 1899, Dr. Ethel Hurd, Minneapolis, formed a group of medical women. Her friend, Dr. Mary Sermour, president of the Chicago medical women's group, visited this group, and two months later, the medical women's organization was founded. Dinner meetings were given in the homes of members with the women medical students as guests.

Dr. Catherine Putnam, born in Troy, Wisconsin, February 9, 1851, entered the Medical College of Minnesota at the age of 36 years. After completing her schooling at Troy, she attended teachers' colleges at River Falls, Wisconsin, and the Minnesota University. She served as primary principal in River Falls and later in the St. Paul schools. Becoming interested in medicine while reading the Encyclopedia Britannica in preparation for an ex-

amination, she received her M.D. in 1901. During 1901 and 1902, she assisted in the Department of Women and Children in the Minneapolis Free Dispensary and has been assistant physician at the Women's and Children's Hospital, Minneapolis. She was a member of the A.E.I., the oldest women's medical society in America, of which she was president in 1900.

She practiced in both St. Paul and Minneapolis. In 1903, she took postgraduate work in New York and in the following year in Vienna. She continued teaching school while carrying on her practice in medicine. Her home was on University Avenue in St. Paul. She travelled in Europe in 1906, and died in the early years of her practice.

In 1901, the medical women's organization founded the state fairground's first emergency hospital. It was started by an exhibit in a tent to show how a hospital room should look. Immediately emergency cases began coming in for treatment. For several years, it remained the medical women's hospital.

During World War I, the medical women's organization was expanded into a state association. It was credited with sending large quantities of clothing and goodly sums of money to France.

SIXTH INTERNATIONAL CANCER CONGRESS

(Continued from page 17)

Documents representing the first four panel projects included the phase of study and negotiation, and can be finished and published by the panel chairman or transmitted to other appropriate organizations for their approval, editing, and publication. The statistics panel had a consultative function and will become an independent committee.

Not only committee members, but also many doctors not on this committee gave us their advice and worked hard to accomplish these tasks. One example of co-operation: the code for nomenclature of tumors in humans went through three revisions before an agreement was reached. Each draft represented tedious study and testing. English, Spanish, Portuguese, as well as Latin copies were prepared for the Congress. French and German copies will be prepared. It was found that Latin was acceptable to the doctors of European countries not speaking the languages listed.

The American Cancer Society was helpful in many ways, specifically in scientific representation, travel grants, and administrative assistance.

This Congress had exceptional continuity in the group work that preceded it, and that will continue after the Congress with greater understanding because of the meetings of the Congress.

Reported by ISABELLA H. PERRY, M.D.

World Health Organization

THE INCIDENCE OF DIPHTHERIA in Europe has for many years been higher than in any other continent, says Dr. A. M.-M. Payne of the Division of Communicable Disease Services, and joint secretary of the Conference of Diphtheria and Pertussis Vaccination, World Health Organization. Nevertheless the trend of the incidence of diphtheria in coming years can be regarded with optimism. From 1947 to 1951 the total number of notifications fell from 183,000 to approximately 69,000 in a large part of continental Europe. The fall was, however, more marked in some countries than in others.

In many countries, including those in sub-tropical regions, there are several hundred to a few thousand cases each year and it can be assumed that owing to under-reporting the real incidence is considerably higher. Even in the tropics it has been shown recently that infants acquire immunity to diphtheria at a very early age. An explanation of this apparent contradiction appears to be that infants are first infected at a time when they are protected by transmitted maternal immunity during the first few months of life.

In its report the Conference states "long experience of immunization against diphtheria has shown that the disease will not be brought under control unless a sufficient proportion of the susceptible children is immunized and kept immune." An immunized child, if heavily exposed to infection, may still contract diphtheria but the disease will be mild and death will be very rare. Less heavy exposures may not result in illness but the child may be temporarily infected and pass the infection on. This emphasizes the need for other hygienic measures, such as isolation, quarantine, and disinfection in the control of diphtheria.

After the more usual exposures, the bacillus will fail to infect the child and the chain of infection is broken. This is actually the most important result of a successful immunization programme; so many susceptible children are rendered relatively immune that the organism cannot readily pass from one to another and to a large extent dies out. Thus, when a child is immunized it is not only being protected itself but is contributing to the protection of others.

It should be emphasized that it is susceptible children who must be immunized. This means infants and young children, although in some countries older children, and occasionally adolescents and adults, are infected in significant numbers. The children should be immunized before their first birthday since the highest incidence and greatest mortality owing to diphtheria is in early childhood. During the second six months of life the child responds well to immunization. Response is less good during the first six months, but under some circumstances early immunization is indicated, and should be followed by a reinforcing dose in the second year. If immunization is delayed until school age is reached, diphtheria will never be controlled and the incidence and death rate will remain high. Following primary immunization in the first year, a reinforcing dose should be given at school age (5 years) since the immunity gradually wears off and needs reinforcing every five years.

In making these statements it has been assumed that a potent vaccine has been used and that the full course of injections has been given. Unfortunately, vaccines vary considerably in their potency and careful laboratory control is needed in their manufacture. Some require three injections to produce satisfactory immunity; others, such as the "adsorbed" or "precipitated" vaccines give superior results after two injections. At present no vaccine can be relied upon to produce immunity after one injection.

Diphtheria, therefore, can be controlled and it is the duty of each parent both to his own child and to the children of others, to ensure that his child is protected. With the best modern preparations the procedure has no danger and reactions are negligible. It should therefore be the aim of every health authority to see that these preparations are freely available and to make it easy for parents to have their children protected, in the first year of life, and with reinforcing doses at regular intervals.

Considerable apprehension has arisen as the result of statements that paralytic poliomyelitis might be precipitated by various inoculations. It should be emphasized that such injections carried out with properly sterilized syringes and needles cannot infect a child with poliomyelitis.

American Medical Women's Association

PRESIDENT'S MESSAGE

AT THE BEGINNING OF THE YEAR, our thoughts naturally go to the tasks ahead of us. First of all, we must make plans concerning the officers who will head our Association next year and the years after that. There are undoubtedly outstanding members in the Branches who are active locally. Won't you tell us about them so that we may be able to enlist their gifts for organization and their willingness to work in a larger field. Please send their names, by the end of January, to Dr. Helen F. Schrack, 216 North 5th St., Camden, New Jersey indicating the office in which their talents would be most useful. Such nominations, as you know, must be signed by five Active members.

On page 24 of this issue, you will find the first announcement concerning our Annual Meeting, in Atlantic City, on June 2-5, 1955. Please pay special attention to the directions concerning the room reservations (see adv. page 36). Because of the thousands of participants expected both at the specialty and AMA meetings, definite rules have been laid down by the Convention Bureau of the AMA. Following these exactly, you will avoid finding yourself in Atlantic City without proper room reservations.

Another task to be furthered at this time is our survey of part-time medical positions open to women. Do you know of any such openings? Have you reported them either to your Branch chairman for opportunities or directly to Dr. Sophie Trent Ryan, Lake Shore Drive, Middlefield, Connecticut, our national chairman for the Committee on Opportunities for Medical Women? This is a very practical way to share in the work of the organization and a very necessary one.

Camille Mermod

FOR NEW AND ASSOCIATE MEMBERS

THE FOLLOWING MESSAGE is to give to our new members a better understanding of our Association. Each member in good standing will receive a copy of the 1954 revised Constitution and By-Laws with her receipt for 1955 dues. The Constitution states: "The object of this organization is to bring medical women into association with each other for their mutual advantage; to encourage social and co-operative relations within and without the profession; to further such constructive movements as relief work and public health; to aid women medical students; and to assist women physicians in postgraduate work."

This object is not fully recognized until one attends meetings and develops friendships with other women physicians. The Annual Meetings, which are both social and scientific, precede the annual meetings of the AMA. Our most recent Meeting was in San Francisco in June. There were two days filled with social and scientific programs. The San Francisco County Medical Society entertained all the women doctors at a Chinese dinner on the first evening of the AMA meeting, another sign of medical women as a group receiving wider recognition. To attend the social events, sightseeing trips, and scientific programs, and to hear the reports from the Committees and Branch presidents or their delegates brings us closer together in working for common goals. It gives one a new incentive to strive to be of help in our profession, and confidence to continue our work.

This was ably pointed out by our President, Dr. Camille Mermod, in her inaugural address, "Doctors are Teachers." She stated that when young doctors start out in practice they are naturally apprehensive when certain situations arise, and it is

(Continued following page)

very gratifying to have someone at the other end of the line to tell them what to do next. By belonging to our organization, no matter where you are in practice, you will be able to hear of some woman doctor who is a member and who has gone through the initial barrier of starting in practice. By merely calling her you will get help and understanding that will lead to many personal pleasures and professional advantages.

Another major objective the American Medical Women's Association has undertaken in the last two years is giving $100 cash awards to any women ranking first in their class in the 71 approved medical schools in the United States. Seven such awards were given in 1954, and Honorable Mention citations were presented to 22 members who were in the upper 10 of the graduating classes.

When you attend the meetings and see what is being evolved by a body of educated and responsible individuals, and see how influential they are in their communities, states, and country, you will realize that you too, by working individually or collectively with them, can be a part of their achievements. Also as a member of the AMWA you belong to the Medical Women's International Association, which meets every two years in different countries. Its objectives are: 1) to afford opportunities for medical women to meet and confer upon questions relating to the health and well-being of humanity, and to secure their co-operation at all times in matters connected with international health; 2) to provide a means of communication between medical women in different countries, to promote the general interest of medical women, and to further friendship and understanding between medical women of the world; 3) to seek greater recognition by other agencies (such as the United Nations, World Medical Association, and the International Association of Professional, Business and University Women); and 4) to obtain greater interest in membership by extending a cordial invitation to the medical women of the Latin American countries to attend the MWIA Congresses.

We hope that this brief resume will awaken the interest of new Active and Associate members and inspire them to attend every Annual Meeting; open avenues of thought toward helping the Association in each Branch and in the national organization; and encourage participation in organizing the medical women of the world.

MARIE K. BEPKO-PUUMALA, M.D.,
Immediate Past-President
Branch Twenty-Six, Minnesota

ANNUAL MEETING
June 2-5, 1955
Hotel Dennis, Atlantic City, N.J.

Thursday, June 2

9.00 a.m.—Registration—Lower Lobby
9:00 a.m.—Publications Committee — Board Room
11.00 a.m.—Finance Committee—Art Studio
2:00 p.m.—Executive Committee Meeting — Board Room

Other committee meetings as arranged by the chairmen

Friday, June 3

9:00 a.m.—Registration—Lower Lobby
9:30 a.m.—Board of Directors—Board Room
10:30 a.m.—General Session—Garden Lounge
12:30 p.m.—Luncheon—Ozone Suite
3:00 p.m.—General Session—Garden Lounge
7:30 p.m.—Woolley Memorial Lecture — Ozone Suite

Saturday, June 4

9:00 a.m.—Registration—Lower Lobby
9:30 a.m.—General Session—Garden Lounge
12:30 p.m.—Luncheon—Ozone Suite
3:00 p.m.—General Session—Garden Lounge
7:30 p.m.—Inaugural Banquet—Ozone Suite

Sunday, June 5

9:30 a.m.—Executive Committee Meeting — Board Room
10:30 a.m.—Board of Directors Meeting — Board Room

NEWS FROM THE BRANCHES
Branch Twenty (Blackwell)
Detroit, Michigan

The program for the Blackwell Society for 1954-1955 is as follows:

September 15, 1954—Organization meeting with a buffet supper.

November 9, 1954—A combined dinner meeting with the Michigan Women Lawyers' Association. The speaker was Martha W. Griffiths, former judge of the Recorder's Court, who spoke on "Medical Liability."

January 12, 1955—Dinner meeting. A symposium was presented on "The Problems of Infertility," with Dr. Marjorie Peebles-Meyers, moderator. Speakers included Dr. L. Ange Kozlow, gynecology; Dr. Maitland Stewart, urology; Dr. Genevieve Grotz, pediatrics; and Dr. Margaret Baima, psychiatry.

March 9, 1955—Dinner meeting. Dr. Fred Swartz will speak on "Clinical Rapport."

May 1955—Annual meeting. Officers will be elected.

Opportunities For Women in Medicine

FELLOWSHIPS

NATIONAL FOUNDATION FOR INFANTILE PARALYSIS

A limited number of clinical fellowships are available in the fields of physical medicine and rehabilitation. These are offered to physicians who are wishing to become eligible for certification by the American Board of Physical Medicine and Rehabilitation.

It is the responsibility of each applicant to arrange his own program of study, which must be planned to meet the requirements of the American Board of Physical Medicine and Rehabilitation. Each recipient must agree to practice as a specialist in physical medicine and rehabilitation in the United States or its territories for at least two years following the completion of his fellowship.

Applicants for fellowships must be physicians licensed to practice medicine in one or more states who have graduated from an approved school of medicine, have completed an internship of not less than one year in an approved hospital, are citizens of the United States (or applicants for citizenship), and are in sound health. Ordinarily applications will not be accepted from candidates over age 40.

Selection of candidates is made on a competitive basis by the National Foundation's clinical fellowship committee. Appointments are made for periods of one, two or three years of clinical study, depending upon the length of time required by the applicant to prepare for certification by the American Board of Physical Medicine and Rehabilitation.

Fellows receive stipends ranging from $300 to $400 per month depending upon marital status and the number of dependents.

* * *

The availability of a limited number of clinical fellowships for physicians interested in rehabilitation as it relates to their particular specialties has been announced.

The purpose of these fellowships is to provide an opportunity for physicians to study the concept and basic techniques of total rehabilitation. It is the responsibility of the candidate to arrange a program of study which places emphasis on rehabilitation in relation to his individual clinical specialty.

Applicants are eligible for these fellowships if they have graduated from an approved school of medicine, have completed not less than one year of internship and one year of approved resident training in one of the medical specialties in an approved hospital, are licensed to practice medicine in one or more states, are U.S. citizens (or have made application for citizenship), and are in sound health.

Selection of candidates will be made on a competitive basis by the National Foundation's Clinical Fellowship Committee and fellowships will be awarded for periods of three months to one year.

Financial awards are based on the individual need of each applicant and may include tuition, if any, and a monthly stipend for maintenance. The stipends range from $300 to $400 per month depending upon marital status and the number of dependents.

* * *

A limited number of fellowships are available to psychiatrists who are interested in the emotional problems of the physically handicapped, particularly of the poliomyelitis patient who has respiratory difficulties.

In order to be eligible for these fellowships, physicians must have completed two years of graduate training in psychiatry acceptable to the American Board of Psychiatry and Neurology, be U.S. citizens (or applicants for citizenship), and be in sound physical condition.

The applicant must propose a program of study to be undertaken in a center concerned with rehabilitation of the physically handicapped which has affiliations with an approved department of psychiatry. The training of the Fellow in the application of psychiatric concepts and methods to the treatment of the physically handicapped must be supervised by the department of psychiatry. An opportunity for working with poliomyelitis patients with respiratory difficulties should be available.

Selection of candidates is made on a competitive basis by the National Foundation's Clinical Fellowship Committee. Appointments will be made for one year but may be extended upon recommendation of the Committee.

Financial benefits will be determined by marital status and number of dependents. Stipends range from $3,600 to $7,000 a year.

A limited number of postdoctoral fellowships in medicine and the related biologic sciences are being offered by the National Foundation for Infantile Paralysis.

These fellowships are offered to candidates who are preparing for careers in scientific research and/or academic medicine. They are not awarded to investigators for the support of a research project. Special consideration will be given to applicants interested in such fields as: microbiology, biochemistry, biophysics, orthopedics, pediatrics, neurology, and epidemiology.

Eligibility requirements include: an M.D., Ph.D., or equivalent degree; U.S. citizenship (or application for citizenship); and sound health. Selection of candidates will be made on a competitive basis by the National Foundation's Fellowship Committee. Fellowships will be awarded for a period of one to three years and in rare instances may be extended to five years.

Stipends ranging from $3,600 to 7,000 a year are allowed, the specific sum being determined by marital status and number of dependents. The institution in which the Fellow receives his training may request compensation of $500 to $1,000 a year.

For consideration by the Fellowship Committee, applications for the above for consideration in May, must be filed by March 1; for consideration in November, by September 1.

For further information and application blanks address: The National Foundation for Infantile Paralysis, Division of Professional Education, 120 Broadway, New York 5, N.Y.

* * *

The National Foundation for Infantile Paralysis offers clinical fellowships primarily for resident training in orthopedics at centers approved by the AMA Council on Medical Education and Hospitals. Fellowships will be awarded for periods of six months to three years, depending on the time necessary for the candidate to complete his requirements for certification by the American Board of Orthopedic Surgery. Eligibility requirements include U.S. citizenship or application for citizenship, a one year internship, and one year of resident training in general surgery at approved hospitals. Candidates must be under 36 years of age. Stipends range from $300 to $400 a month, depending on marital status and number of dependents. One fellowship in orthopedic surgery will be offered each year to an applicant who has already completed three years of approved resident training in orthopedic surgery. This fellowship will be awarded for one year's study at Warm Springs, Georgia, with a stipend varying from $4,500 to $7,000 a year. Exceptions to the age limit of 36 years may be made for this candidate. All applicants must make their own arrangements with the training center before applying for a fellowship. Selection of candidates will be made on a competitive basis by the foundation's clinical fellowship committee. Applications for fellowships received by March 1 will be considered in May. For application form and further information address the National Foundation for Infantile Paralysis, Division of Professional Education, 120 Broadway New York 5, N.Y.

Cancer

The Vincent Memorial Hospital, the gynecologic service of the Massachusetts General Hospital, Boston, announces an American Cancer Society fellowship in cancer research. Appointments are for one year. Information can be obtained from Dr. Joe V. Meigs, Vincent Memorial Hospital, Fruit Street, Boston 14, Massachusetts.

* * *

The Bertha Gerber Memorial Cancer League of which Dr. Adolph A. Smolen is president has established the Bertha Gerber Memorial Cancer League fellowship at the Chicago Medical School with a grant of $3,000 for the present year. The money is to be used to support a young scientist engaged in cancer research in the department of oncology under Philippe Shubik, Ph.D., director.

Research

The National Jewish Hospital at Denver announces the creation of the Walter P. Harris fellowship in clinical research and the A. T. Hirsh fellowship in cardiopulmonary physiology.

The Harris Fellow will have a tenure of two to three years for studies in chest diseases under the guidance of Dr. Gardner Middlebrook, director of research and laboratories.

The Hirsh Fellow will have one year tenure in cardiopulmonary physiology and experimental surgery with Dr. Alfredo Lanari, chief of the cardiopulmonary physiology laboratories.

Applications for the fellowships should be directed to Dr. Gardner Middlebrook, Director of Research and Laboratories, National Jewish Hospital, Denver 6, Colorado.

Medicine

The National Medical Fellowships, Inc., has recently announced that grants totaling $80,000 were awarded to 51 Negro physicians and students of medicine and related fields for the year 1954-1955 and $14,000 was made available for loans. National Medical Fellowships, Inc., of 951 East 58th St., Chicago, was incorporated in 1946 as a

nonprofit organization to improve medical practice through the advancement of education and research. At the present time the organization limits its activities to the field of Negroes in medicine. Inquiries by qualified applicants are welcome.

* * *

The Lederle Laboratories Division of the American Cyanamid Company is making available to medical students throughout the United States and Canada "Lederle Medical Student Research Fellowships." These fellowships in amounts not exceeding $600 per year for any one person are intended to relieve in part the financial burden of students who desire to devote their summer vacations to research in the basic (preclinical) medical sciences. Students who apply for Lederle Medical Student Research Fellowships must be of good scholastic standing and must have the consent of the faculty member under whose supervision their research is to be conducted. The selection of students to receive such awards will be made by the dean of the medical school or by the regularly constituted committee of the faculty charged with such selections. By special permission of the dean or the fellowship committee of the school the student may carry on such research in another medical school provided that satisfactory arrangements are previously made with the faculty member of the chosen school and the department involved.

Information may be obtained from Dr. Benjamin W. Carey, Director of Laboratories, Lederle Laboratories Division, American Cyanamid Company, Pearl River, New York.

* * *

A fellowship fund for the investigation of infection and immunity, and providing funds to support predoctoral and postdoctoral as well as senior and faculty fellowships has been established at the University of Texas Medical Branch, Galveston, to honor the late Dr. James W. McLaughlin, formerly professor of internal medicine of the Medical Branch and regent of the University. The fellowships will be made for one year with opportunities for renewal in certain instances. Applications may be made to the Executive Director, University of Texas Medical Branch, Galveston.

* * *

To further medical teaching and research, the Commonwealth Fund each year awards advanced fellowships in medicine and closely allied fields. Applicants must be members of a university teaching staff, an accredited teaching institution, or an organization serving community health needs, or be assured of such an appointment on the completion of fellowship work. They must be American or Canadian citizens, and hold an M.D. or Ph.D. Work may be done in this country or abroad. Tenure is usually for one year, and the stipend is adjusted to the individual need. Applications are received at any time and awards made several times a year. Applicants should submit a full statement of their interests, proposed program of study, and plans for the future, accompanied by a curriculum vitae, endorsement of the application by the sponsoring faculty or organization, and an estimate of financial needs. Inquiries and applications should be addressed to Robert Jordan, Secretary, Fellowship Committee, The Commonwealth Fund, 1 East 75th St., New York 21.

SCHOLARSHIPS

The Anna Bartsch-Dunne Medical Scholarship for Women has been established at the State University of Iowa. It represents a $20,000 bequest from Dr. Anna Bartsch-Dunne of Washington, D.C., given "for the purpose of establishing an endowment to be known as the Anna Bartsch-Dunne Medical Scholarship for Women, the income of which shall be awarded annually as a medical scholarship for study at the College of Medicine, State University of Iowa, to a young woman from Burlington, Iowa; and if there is no young woman available from that city, then to a young woman from elsewhere in the state of Iowa; and if there is no available candidate who is a resident of Iowa, then to a young woman from outside the state of Iowa. If no candidate is available in any year, I direct that the income available for distribution that year shall be impounded and made available for the appointment of additional scholars in any subsequent year." For further information write Norman B. Nelson, M.D., Dean, State University of Iowa, College of Medicine, Iowa City.

* * *

Scholarships for study in Mexico for the academic year beginning March 1, 1955, are being offered by the Mexican government to 11 graduate and 5 undergraduate students through the Mexico-United States Commission on Cultural Cooperation. Requirements for the awards are: U.S. citizenship, knowledge of Spanish, a good academic record, a valid project or purpose, and good health. The scholarships are expected to cover tuition and full maintenance but not incidental expenses and travel. Recommended fields for graduate study are architecture, Indian and physical anthropology, enthology, archaeology, cardiology, and tropical medicine.

Information may be obtained from the Institute of International Education, 1 East 67th St., New York, N.Y.

MEDICAL OFFICERS

Examinations have been announced by the U.S. Civil Service for filling medical officer positions in certain federal agencies as follows: medical officer paying $5,940 and $7,040 a year, and medical officer (specialist) paying $8,360 and $10,800 a year will be filled in various agencies in Washington, D.C., and vicinity, and in the United States Public Health Service and the Children's Bureaus located throughout the United States; medical officer, paying $7,425 to $10,450 a year, will be filled in the Panama Canal Zone Government Organization in the Panama Canal Zone.

Applicants must be graduates of medical schools and for most positions must have completed a full internship. For medical officer (specialist) positions, applicants must have completed appropriate study or residency training. Professional medical experience is required for the higher paying positions. No written examination is required.

Information regarding these positions is given in announcement 415 for medical officer, announcement 414B for medical officer in the Panama Canal Zone, and examining circular EC-27 for medical officer (specialist). These notices may be obtained from the U.S. Civil Service Commission, Washington 25, D.C.

INTERNSHIPS

Two rotating internships are now open at the Bristol Hospital, Bristol, Connecticut. Appointment is for 12 months; stipend $150 a month, plus maintenance. Apply to Mr. A. Towl, Bristol Hospital, Bristol, Conn.

AWARDS AND CONTESTS

"Modern Developments in Anesthesia" is the subject chosen for this year's dissertation by the trustees of the Caleb Fiske Prize of the Rhode Island Medical Society. A cash prize of $250 is offered. For information, write to the Secretary, Caleb Fiske Fund, Rhode Island Medical Society, 106 Francis Street, Providence 3, Rhode Island.

* * *

U.S. Government awards authorized under the Fulbright Act are offered exclusively for university lecturing and for research at the postdoctoral level. Awards are ordinarily made for the full academic year although in exceptional circumstances applications will be considered for research for periods of not less than six months or for lecturing for a semester or for the full period of an established summer school.

Awards may be made for only one of the following countries: Austria, Belgium and Luxembourg, Denmark, Egypt, Finland, France, Germany, Greece, Iraq, Italy, Japan, Netherlands, Norway, Pakistan, Sweden, and the United Kingdom and its colonial dependencies. Awards under the Fulbright Act are made in the currency of the host country.

Maintenance allowances are calculated on the basis of living costs in the host country and therefore differ from country to country in dollar equivalents. In terms of purchasing power they are approximately equal.

Eligibility Requirements:

1. Applicants must be United States citizens.
2. Those applying for lectureships are expected to have at least one year of college or university teaching experience in the United States or abroad.
3. Applicants for research awards are expected to have a doctoral degree from a recognized institution of higher learning in the United States or abroad, at the time of application, or recognized standing in their respective professions. Candidates for the doctoral degree or those expecting to obtain it in the normal course of their training should apply to the Institute of International Education, 1 East 67th St., New York.
4. Specialists in such fields as nursing education, social work, adult education may apply for either research or lecturing awards, and will be considered eligible if they have completed their formal undergraduate and postgraduate work and have been established in their professions for several years.

Application forms and additional information are obtainable from the Conference Board of Associated Research Council Committee on International Exchange of Persons, 2101 Constitution Ave., Washington 25, D.C.

POSTGRADUATE CONVENTION

Outstanding lectures, panel discussions, along with refresher courses, scientific and technical exhibits, and women's activities, will be featured at the 1955 Alumni Postgraduate Convention in Los Angeles, February 15 to 17, 1955.

The three day convention, sponsored by the Alumni Association of the School of Medicine of the College of Medical Evangelists, is open to all physicians regardless of their school affiliation.

The Scientific Assembly meeting is preceded by two days of refresher courses on the CME's Los Angeles campus at the White Memorial Hospital. These courses are planned primarily for general practitioners and are open to all physicians.

Requests for information should be addressed to the Managing Director, Walter B. Crawford, 316 North Bailey Street, Los Angeles 33, Calif.

DELLA G. DRIPS, M.D.

DELLA G. DRIPS, M.S., M.D., was born September 24, 1884, at La Crosse, Wisconsin, and moved with her family to Rochester, Minnesota, in 1907. She was graduated from the University of Wisconsin. In 1917, she received her M.S. degree, with a major in pathology, from the University of Minnesota, and in that year, too, she published her first scientific paper. In 1921 she obtained her degree of Doctor of Medicine from the University of Minnesota.

In 1921, she entered the Mayo Foundation, Graduate School of the University of Minnesota, Rochester, as a fellow in medicine, was appointed first assistant in a section of medicine of the Mayo Clinic in 1922, consultant in gynecology and medicine in the Mayo Clinic, and assistant in the Mayo Foundation in 1924.

She was successively assistant, assistant professor, and associate professor of medicine in the Mayo Foundation. During these years, many Fellows of the Foundation profited by her readiness and ability to teach, and became her warm friends.

She continued in the practice of medicine and her specialty of gynecology at the Mayo Clinic until her retirement in 1949.

Gynecologic endocrinology was her special interest throughout the years. Dr. Drips made pioneer investigations in the field of hormones. In 1932, she studied gynecologic endocrinology under Prof. Selmar Aschheim in Berlin. On her return, she developed, with Dr. Frank C. Mann and Dr. Arthur H. Sanford, the first laboratory in this field at the Mayo Clinic. She maintained an authoritative knowledge of gynecologic endocrinology, and was frequently called on to lecture to the fellows on its various aspects. She has made many contributions to medical journals.

Besides her clinical and teaching activities, she participated in the organization and work of the Mayo Clinic Women's Club, and served for several years as chairman of its health committee.

Dr. Drips was a charter member of the Rochester, Minnesota, chapter of the Business and Professional Women's Club, and is still an active member. At various times she has held positions in the state organization.

She is a member of the Central Association of Obstetrics and Gynecology, American Medical Association, American Medical Women's Association, Minnesota State Medical Association, Southern Minnesota Medical Association, the Alumni Association of the Mayo Foundation, and the Mayo Foundation chapter of Sigma Xi.

Dr. Drips now lives at her lakeside home not far from Rochester at Oronoco, Minnesota, where her many friends visit her. To the American Medical Women's Association she is an essential member.

—KATHARINE SMITH

News of Women in Medicine

DISTRICT OF COLUMBIA. The International Congress of Clinical Pathology was held in Washington recently under the sponsorship of the International Society of Clinical Pathology and on the invitation of the American Society of Clinical Pathologists. Dr. Emma S. Moss, New Orleans, served as moderator for a symposium on diseases caused by fungi.

At the first interstate scientific assembly of the Medical Society of Virginia and the Medical Society of the District of Columbia, Dr. Susan Coons Dees discussed pediatric allergy, Dr. Dees is associate professor of pediatrics and allergy, Duke University School of Medicine, Durham, North Carolina. Dr. Margaret M. Nicholson, second vice-president of the Medical Society of the District of Columbia, presided at one of the sessions during which hypertension, arthritis, breast cysts, and so forth were discussed. Dr. Grace H. Guin, associate pathologist, Children's and Garfield Memorial Hospitals, Washington, D.C., presented a paper, "Cytology as a Practical Diagnostic Aid." Dr. Eloise W. Kailin of Washington had an exhibit on Control of House Dust Allergens.

Dr. June Carol Shafer, of Arlington, Virginia, was recently elected a member of the American Dermatological Association. Dr. Shafer is an alumna of the University of Wisconsin School of Medicine and is an associate member of the District Medical Society.

Dr. Jeanne C. Bateman presented a paper before the meeting of the International College of Surgeons in Chicago at the Palmer House. Her subject was "Palliation of Far Advanced Cancer with Triethylene Thio Phosphoramide."

Dr. Ruth Stocking has been appointed director of Children's House. She had been serving as acting director of the District health department's division of mental health in the absence of Dr. Leopold E. Wexberg, director. Dr. Stocking, a graduate of the University of Chicago School of Medicine, is a diplomate of the Washington School of Psychiatry. She is on the staff of the division of neuropsychiatry of Howard University School of Medicine and has been consulting psychiatrist at Children's House for four years. Children's House is one of three independent but co-operating agencies of the Hillcrest Children's Center. It has day classes for emotionally disturbed and immature children, as well as after-school therapy classes for pupils of regular schools. Dr. Stocking estimated the enrollment at between 50 and 60 pupils.

More than 1,400 physicians attended the fifty-ninth annual convention of the National Medical Association, which was held in Washington. Many members of the Medical Society of the District of Columbia contributed to the success of the scientific program. Following is a list of the papers they presented at the various sectional and general meetings: "Pericarditis," Dr. John B. Johnson, Dr. Janet Eve, and Dr. Donald Keller; "Complications of Acute Pyogenic Infections," Dr. Margaret Grigsby; "Accidental Fatal Poisonings in Children," Dr. Katherine Bain and Dr. Marian M. Crane; and "The Therapy of Disability," Dr. Josephine J. Buchanan.

Dr. Anna Bartsch-Dunne has established scholarships at the State University of Iowa, to be known as the Henry and Anna Bartsch Endowment, in memory of her parents. The funds will provide for an annual medical scholarship for a woman, also an annual medical internship for a woman, available to residents of Iowa. These scholarships are similar to the Anna Bartsch Endowment, established at George Washington University several years ago, in memory of her mother.

The committee on public information of the Medical Society of the District of Columbia recommended that a representative be appointed to serve on the advisory council of the Greater Washington Educational Television Association, Inc., Dr. Josephine Renshaw, chairman of the committee on public information, was designated by the board to serve in this capacity.

GEORGIA. The twenty-second annual scientific meeting of the Georgia Pediatric Society was held recently at the Mayfair Club, Atlanta. During the afternoon session, "New Developments in Immunization" was discussed by Dr. Margaret H. Smith, associate professor of microbiology, Tulane University of Louisiana School of Medicine, New Orleans.

ILLINOIS. Dr. Frances Kap-Dayton was a participant in a panel on heart disease. This program was the first of a series of medical forums conducted by the Knox County Medical Society

and the Galesburg Register-Mail.

At the annual meeting of the Chicago Dermatological Society, Dr. Irene Neuhauser was named secretary-treasurer.

Dr. Bertha A. Klien was elected vice-president of the Chicago Ophthalmological Society.

In memory of the late Dr. Margaret W. Gerard, the Chicago Institute of Psychoanalysis has established the Margaret Gerard Memorial Fund, to be used for research and training in the psychoanalysis of children. Dr. Gerard, who was associated with the institute, first as candidate and then as staff member, from the time it was established, participated actively in its research program, beginning with studies in asthma some twenty years ago. She was also affiliated with the University of Chicago and the University of Illinois.

KANSAS. Dr. Frances Schiltz, Wichita, was presented a certificate of award by the University of Wichita on May 12 for 25 years of service as medical director for women.

MARYLAND. Dr. Hilda J. Walters has been elected to the executive committee of the medical staff of Miners Hospital, Frostburg.

The National Rehabilitation Association held its annual conference at the Lord Baltimore Hotel, Baltimore. Physicians participating in the program included Dr. Helen B. Taussig, Baltimore.

Dr. Taussig has received the coveted Lasker Award for her part in developing surgery for "blue babies." She was also honored recently by the American Public Health Association.

MICHIGAN. Dr. Gladys J. Kleinschmidt has been appointed director of the Manistee-Mason district health department.

MINNESOTA. Dr. Elizabeth A. Leggett has resigned her position as head of the Indian outpatient office of the Indian Welfare Department in Bemidji. Dr. Leggett will be associated with the Santa Ana, California, health department. Before moving to Bemidji, Dr. Leggett practiced at the Ah-Gwah-Ching sanatorium and at Cass Lake.

NEW JERSEY. The New Jersey Diabetes Association in co-operation with the New Jersey State Department of Health presented the second annual symposium on diabetes mellitus. "Diabetes in Children" was discussed by Dr. Priscilla White, attending physician, New England Deaconess Hospital, Boston, Massachusetts.

The fifth graduate fortnight of The Academy of Medicine of New Jersey was held November 1 to 12. The subject was, "Rehabilitation—A Scientific Approach to Normal." "Public Health Laws and Policies" were presented by Dr. Marian R. Stanford, director, division of chronic illness control, New Jersey State Department of Health. "Heart, Multiphasic Screening, and Cancer Programs" was the topic given by Dr. Katherine H. Hain, chief, heart control program of New Jersey State Department of Health.

NEW YORK. "Atherosclerotic Lesions in Diabetes" was discussed by Dr. Margaret Bevans at a meeting of the New York Diabetes Association.

"Hypertension" was the title of a radio address given by Dr. Marcelle Bernard of New York. The radio talk, over station WBNX, was presented by the Bronx Tuberculosis and Health Association and the Bronx County Medical Society. A Fellow of the American Geriatrics Society, Dr. Bernard is an assistant attending physician at St. Francis Hospital and at the New York Infirmary.

Dr. Ada Chree Reid, who is a member of the Board of Directors of the International Citizens Committee For The World Health Organization, was speaker on World Community Day, November 5, 1954, over the Mutual Broadcasting System; the subject being "Building Peace with Emphasis on Contributions of WHO." That evening Dr. Reid was a speaker at the Founders Day Program of the Mills College of Education. Her subject was "The World Health Organization—Its Promise to the Children of the World."

WISCONSIN. Dr. Sarah Rosekrans has been elected secretary of the new Neillsville Memorial Hospital. Dr. Rosekrans is a charter member of the hospital staff.

Dr. Bertha Reynolds of Avoca and Dr. May R. Wells of Belleville, Illinois, were presented certificates as new members of the "50-Year Club" of the State Medical Society of Wisconsin.

At the annual meeting of the State Medical Society of Wisconsin Dr. Elizabeth A. Steffen of Racine gave an obstetrics manikin demonstration, "Management of Transverse Presentation and Breech Presentation."

General

Dr. Katharine D. Brownell, director, Manhattan Rheumatic Fever and Cardiac Program, New York, has been re-elected vice-chairman of the Council on Rheumatic Fever and Congenital Heart Disease of the American Heart Association.

In response to numerous requests from physicians, students, scientific workers, and libraries throughout the world, the American Heart Association has reprinted the "Atlas of Congenital Cardiac Diseases," by Dr. Maude F. Abbott. This

classic monograph, a critical analysis of 1,000 cases of congenital cardiac anomalies, was first published by the Association in 1936. Long since out of print, it has now been reprinted in a limited edition of 1,500 numbered copies exactly as it appeared originally. The work of Dr. Abbott, who died in 1940, served to bridge the gap between the previous unsystematic and largely descriptive knowledge of congenital cardiac defects and the present era of precise diagnosis and dramatic surgery. Her systematic study and classification opened the way for the practical developments of the past two decades.

Dr. Nellie Holman's experience as a medical missionary in China in the 1920's are recorded in a new book, "My Most Unforgettable Patients" (Pageant Press). The author, a former Appleton resident, was graduated from the University of Minnesota Medical School in 1919. A missionary of the Evangelical Lutheran Church, Dr. Holman spent eleven years in China. In 1931, Dr. Holman contracted tuberculosis and returned to Minneapolis's Glen Lake Sanatorium. Dr. Holman now makes her home in Melbourne, Florida.

At the annual meeting of the American Cancer Society, held in the city of New York recently, Dr. Ruth M. Graham and others presented "Biologic Criteria in the Selection of Patients for the Treatment of Carcinoma of the Cervix." Dr. Graham is on the staff of Vincent Memorial Hospital in Boston. "The Correlation Between the Granulosa Theca Group of Ovarian Tumors and Endometrial Changes" was the title of a talk given by Dr. Hazel Mansell of the Free Hospital for Women, Brookline, Massachusetts.

Topics treated by two women doctors at the Sixth International Congress of Catholic Doctors were "Social Customs and Diet in the Missions" by Mother Anna Dengel, M.D., foundress and superior general of the Medical Mission Sisters, Philadelphia, and "Demography in Catholic Missions" by Dr. Margaret M. Nolan, of Ireland. Doctors from 17 countries attended the congress in Dublin, Ireland, from June 30 to July 4. Demography was the theme of the congress. It is significant to note that fourteen Sister-Doctors were present—the greatest number ever to assemble in any given place at one time, as Religious women have been practicing medicine in its full scope only since 1936. The Medical Mission Sisters of Philadelphia were pioneers in this field.

International

Recommendations on the function, status, and training of nurse tutors are contained in a report issued jointly by the Ministry of Health, the Department of Health for Scotland, and the General Nursing Councils for England and Wales and Scotland. The report is the work of a committee appointed three years ago under the chairmanship of Dr. Janet K. Aitken.

The Society of Medical Officers of Health held a meeting at the London School of Hygiene and Tropical Medicine on September 16. Dr. Jean Mackintosh was installed as president for the coming session. The subject of her presidential address was, "The Way Ahead."

Dr. Annis Gillie has been elected president of the British Federation of Medical Women. Her induction by the retiring president, Dr. Mary Esslemont, was announced as the final ceremony at the annual general meeting held on May 6 at Sheffield. The title of Dr. Gillie's presidential address was "Motive and Momentum."

The title of clinical lecturer at the University of Oxford was conferred on Dr. Victoria Smallpeice. She will lecture on diseases of children.

Dr. Doris Gordon has been admitted to honorary fellowship in the Royal College of Obstetricians and Gynecologists. Dr. Gordon has had a distinguished career in New Zealand and had stimulated public opinion in the matter of progress in the field of obstetrics. She had pressed for the use of analgesia in childbirth and experimented with twilight sleep. She was the first woman from Australia to obtain a fellowship in any Royal College, and she was responsible for the founding of the New Zealand Obstetrical Society and for the new chair in gynecology in New Zealand.

The annual scientific meeting of the British Diabetic Association was held during the summer at University College Hospital Medical School, London. Dr. Joan Walker, Leicester, ended an excellent meeting with a notable account of the "small hard core" of adolescent diabetics with intellectual and environmental difficulties, who so badly need protection and education. It was possible, she said, that diabetes might accentuate an underlying psychopathy, and the problems of the home were magnified for the young diabetic. It was not generally realized that certain patients might give themselves a dose of insulin designed to produce hypoglycemia in order to escape from their environment. There was a great need for a center such as her own Burley-on-the-Hill, where sympathetic handling and rehabilitation could do much for this social problem.

These Were The First

Elizabeth Bass, M.D.

Dr. Jennie McCowen, of Davenport, Iowa, taught school for 12 years to earn money for a medical education. She graduated in 1876 from the Medical Department of the State University of Iowa, and was the first woman president of the Scott County Medical Society of Iowa (1883-1884), and the third woman elected to the Medico-Legal Society of New York (1885). Dr. McCowen was a member of many scientific and cultural societies, was chief of the staff of Woman's Hospital in Davenport, and was a Fellow of the Society of Sciences, Letters and Arts, London.

Dr. Amanda Sanford Hickey, of Rhode Island, graduated from the Department of Medicine and Surgery, University of Michigan, in 1871, the only woman and second in rank in a class of 90 men. At that time this was the only medical college where women were accorded equal privileges with men and she was the first woman to receive a medical degree there. She practiced in Auburn, New York, from 1871 to 1894 and was one of the original staff of eight of the Auburn City Hospital where she served until her death. She was married to Patrick Hickey.

Dr. Roberta H. M. Jull was the first medical woman to practice in Perth, Australia, having graduated from medical school in 1896. During World War I she was made casualty surgeon at the Perth Public Hospital and in 1917 was appointed the first medical officer for the schools of Perth, which position she held until her retirement in 1929. Dr. Jull also was the first in the field of infant welfare service in Western Australia.

Dr. Catherine Chisholm was the first woman to be given an honorary fellowship in the Royal College of Physicians of London. She received her medical degree from Manchester University and was accepted in the faculty of that university. Dr. Chisholm was instrumental in founding the Manchester Babies' Hospital, 1914, and was well known for her work in pediatrics and for her contributions to civil liberties. Dr. Chisholm was president of the Federation of Medical Women, 1928-1929, and in 1943 was president of the Manchester Medical Society.

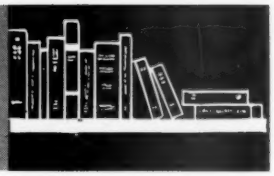
Dr. Martha Hayward obtained her medical degree in 1908 from the University of Colorado School of Medicine and was the first woman to receive, by reciprocity, a North Carolina medical license. Following her retirement from practice in Raleigh, North Carolina, she resided in Florida.

Dr. Jane Harriet Walker was the first president of the British Federation of Medical Women, founded in 1917. "Dr. Jane" was known for her pioneer work in pulmonary tuberculosis and, after visiting sanitariums in Germany, she introduced the open air treatment first in Norfolk, then in Suffolk. For many years she served as justice of the peace in West Suffolk where there is now a memorial plaque and organ in the East Anglican Chapel in her name. Her East Anglican Sanitarium was started in 1901 and four years later she established a sanitarium for children. During the World War I years she devoted her efforts toward the rehabilitation of ex-soldiers.

Dr. Valerie André, of Strassbourg, entered the Faculty of Medicine at the University of Paris in 1941 and in seven years became known as an able brain surgeon. In 1949 she was assigned to a French paratrooper unit in Indo-China where she served for more than three years as French Army captain, doctor, and helicopter pilot. For her work in treating soldiers wounded in northern Indo-China, Dr. André received the French Croix de Guerre, adding to it three palms, and in 1952 she received the high decoration of the Legion of Honor.

Dr. Mary H. Carew-Hunt was the first woman general practitioner in Oxford, England, and one of the founders of the Oxford Association of Medical Women's Federation. She graduated in 1895 from the London Royal Free Hospital School of Medicine for Women.

Book Notices



Editor's Note: These reviews represent the individual opinions of the reviewers and not necessarily those of the members of the Editorial Board of the JOURNAL.

THE JEALOUS CHILD. By Edward Podolsky, M.D., Department of Psychiatry, Kings County Hospital. Pp. 147. Price $3.75. Philosophical Library, New York, 1954.

The phenomenon of jealousy is used as a convenient point of departure from which Dr. Podolsky explores the causes and cures of many of the common childhood behavior disorders. The discussion is not, actually, restricted to jealousy, but covers most of the other undesirable emotional reactions to unsatisfactory situations. The descriptions are accurate and the language clear, but the book as a whole does not offer anything more than do some other books on child behavior.

One or two chapters are farther off the beaten path, and might have been expanded. One would like to learn more details, for example, about "The Impact of Parental Occupation on the Child's Emotions." What is given is interesting, if scarcely surprising. It would have been valuable to have some case reports, or detailed studies, and also some mention of the problems of the child whose father's occupation is not one to be ashamed of, but rather one overwhelming in its importance. A report on the children of public figures would be a fresh approach.

The book is suitable for any who work with children, and might be recommended to parents who are stable enough not to be alarmed by the gloomier implications.

—M. Eugenia Geib, M.D.

MANUAL OF CHILD PSYCHOLOGY. Edited by Leonard Carmichael, Ph.D., Secretary, Smithsonian Institution; with contributions by Harold Anderson, Clemens Benda, Arnold Gesell, Margaret Mead, Lewis Terman, and others. Second Edition. Pp. 1,213, illustrated. Price $12.00. John Wiley and Sons, New York, 1954.

Basic textbooks in any subject digest the material of the total field into capsule form for the student. However, this approach leaves a broad gulf between the text and actual contact with the literature. An analogy might be made to teaching someone to swim in a three foot pool then suddenly dropping him into the middle of the ocean. Carmichael has designed this manual as "an advanced level textbook to bridge the gap between elementary textbooks and scientific periodical literature of psychology . . . a series of separate chapters, each written by an authority. Its purpose is to provide an accurate and coherent picture of some of the most important aspects of research in the scientific psychology of human development" (Preface).

Of course, in such an ambitious undertaking, only thumbnail sketches of the innumerable papers could be given. But with lengthy bibliographies at the end of each chapter and the appropriate numbered references at each literary citation, an interested person can proceed directly to the literature and read further on any particular subject. Most of the chapters have summaries which include not only general conclusions, but also criticisms of past approaches to individual subjects and areas toward which new research might be directed.

This second edition of the manual carries on the work, and includes some of the material originally assembled by Murchison in his "Handbook of Child Psychology," particularly the 1933 revision. As there have been important developments in the field, Carmichael's manual became necessary. The authors of all the chapters wrote for serious advanced undergraduate and graduate students, as well as for specialists in psychology, and in such related fields as education, pediatrics, psychiatry, and medicine in general. The greatest usefulness of this lengthy book will be in libraries on these subjects.

—Edwin D. Rogers, M.D.

RECENT PROGRESS IN HORMONE RESEARCH, VOLUME IX. "Methods of Steroid Determination in Blood and Urine." Edited by Gregory Pincus, Ph.D. Pp. 467, illustrated. Price $9.50. Academic Press, Inc., New York, 1954.

This volume is dedicated to the late Dr. Konrad Dobriner who contributed so importantly to the subject of steroid chemistry, and it contains the work of outstanding observers in the field. The subjects covered include modern developments in steroid analysis of the estrogens, 17-ketosteroids, corticosteroids, nonketonic steroids, and progesterone in blood and urine. The guiding master of this special interim Laurentian Hormone Conference is Dr. Gregory Pincus. The particularly praiseworthy features of this conference report are the discussions by the experts at the end of each individual paper and the summary discussion at the end of the book.

The three most significant steps in steroid analysis, namely the methods of conjugate hydrolysis, chromatography of the extracts, and techniques of steroid measurement, were under constant debate. Lieberman and his associates emphasize the fact that hot acid hydrolysis produces not only destruction but also artifacts to an extent which obscures the real values of urinary 17-ketosteroids. Alice M. Robinson contributes a valuable chapter on "The Uses and Limitations of Adsorption Chromatography for the Separation of Urinary Ketosteroids" and the discussion by the participant members brings out further useful information. Other outstanding contributions on paper chromaphotography are presented by I. and E. Bush, Kenneth Savard, Leonard Axelrod, and the Worcester Foundation Group.

This book is a "must" in the library of every worker in this field.

—William H. Perloff, M.D.

BIOCHEMISTRY OF CANCER. By Jesse P. Greenstein, Ph.D., Chief, Laboratory of Biochemistry, National Cancer Institute, National Institutes of Health, United States Public Health Service, Bethesda, Maryland. Second Edition, Revised and Enlarged. Pp. 599. Price $12.00. Academic Press, New York, 1954.

In these days of rigid scientific specialization, characterized by edited compilations in which a variety of authors contribute single chapters, it is refreshing to find that a single author can still write a systematic and authoritative volume on so broad a topic as the biochemistry of cancer. It is no small tribute to the author that the scholary and comprehensive character of the original edition is maintained in the second. This edition follows the first closely in the arrangement of subject matter. Following a general introduction, covering the phenomena and taxonomy of the disease, there are two main sections. The first, covering the induction of tumors and their control, occupies about 40 percent of the volume and includes such topics as chemical carcinogenesis, nutritional and hormonal factors, and chemotherapy. Though written primarily for the specialist, this section will be a mine of information to the medical practitioner interested in the latest developments in this field.

Another 40 percent covers the chemistry of tumors. This part is likely to be of more restricted interest, but it is the section in which the scholarship of the author comes into full play, representing as it does the field in which he, himself, has contributed brilliantly. In the present edition the author has done more than bring the one of 1947 up to date. Each section has been not only enlarged, but thoroughly revised. In a spot check, it was found that over 50 percent of the references were dated subsequent to the first edition.

—Sidney Weinhouse, Ph.D.

MODERN CONCEPTS IN MEDICINE. By Julius Jensen, Ph.D., M.R.C.S., L.R.C.P. Pp. 636, illustrated. Price $11.50. The C. V. Mosby Company, St. Louis, 1953.

The overture to this book is entitled "A Functional Approach To an Integrated Concept of Medicine" and, as an overture should, it sets the tone for the entire volume. In its first pages we learn of Dr. Jensen's concept of the human body as a system of dynamic processes, interrelated and subordinated to each other. The primary purpose of these processes is to continue life, and they must therefore adapt themselves to environmental changes. Failures of the adaptive processes to remain within physiologic limits constitute disease.

The book proper consists of four sections: the introduction, which describes the development of modern medical concepts, cellular activity, and the principles of adaptation; Part 2, the essential processes of adapation, such as metabolism, fluid balance, pH concentration; and Part 3, structural facilities in support of adaptive processes (GI tract, liver, and other structures.) The final part deals with cybernetics, that field which considers the interrelationship between the sciences of the physicist, physiologist, chemist, and mathematician. Enzymes, endocrines, and the nervous system are included in this section.

This is a very comprehensive and scholarly book. One has the feeling that it is a little beyond the usual medical student (and perhaps some doctors as well) but it will well repay those who can orient themselves to accept its philosophy.

—Adelaide Romaine, M.D.

OPHTHALMIC SURGERY: A Handbook of Surgical Operations on the Eyeball and Its Appendages. By J. Meller, M.D., Formerly Professor of Ophthalmology, University of Vienna. Revised and Enlarged by Professor Dr. J. Bock, Head, Department of Ophthalmology, University of Gratz, Austria. Sixth Edition. Pp. 507, 287 illustrations. Price $12.00. The Blakiston Company, New York, 1953.

The sixth edition of this well known text was translated into English and edited by Doctors Ray K. and Louis Daily of Houston, Texas. It has been revised by Meller's associate, Dr. J. Bock, who included surgical operations adopted at the Vienna clinic since Meller's retirement. An appendix by the translators consists of recently developed procedures, namely: application of antibiotics pre-and postoperatively in ocular surgery; the addition of hyaluronidase and curare in anesthesia, in intraocular surgery; and the use of cortisone for diminishing postoperative inflammation. The translators' use of retraction suture through the iris in cataract extraction, the injection of air into the anterior chamber, and their technic of corneal transplantation is described.

Meller stated in 1918 that the main purpose of his book was to instruct in ophthalmic surgery. Theoretic discussion therefore has been eliminated and only those operations are described which have been evalulated and proved best at the Vienna clinic, "the Mecca of ophthalmologists from all over the world."

The book starts with operations on the lacrimal sac, operations on the lids: ectropion and entropion tarsoraphy; ptosis; and operation on the eye muscles for esotropia, exotropia, and hyperpropia (the vertical muscles). Chapter 10 is devoted to cataract extraction. Chapter 12 describes various operations for acute inflammatory and chronic simple glaucoma; sclerocorneal trephining, iridenclesis, cyclodialysis, and cyclodiathermy.

Keratoplasty and operations for retinal detachment are given detailed descriptions in chapters 14 and 15. Extraction of intraocular foreign bodies, magnetic and amagnetic, of intraocular Cysticercus (which is a rarity in this country) are described in chapter 16. The final chapter, 17, takes up miscellaneous operations on the lids, conjunctiva, cornea, vitreous, irradiation of retinoblastoma; and the role and duties of the assistant.

The outstanding features of this book are the clarity of description of the various steps of the operations, and the numerous beautiful illustrations (some in color) which make it easy even for beginners to follow a given operation.

The general description of the conditions suitable, or unsuitable, for a certain operation, the pitfalls, complications, and steps to prevent them are discussed in great detail. The preparation of the patient, the eye, the postoperative care are emphasized in each chapter.

As a whole this book is a true classic in ophthalmic surgery. It should be an invaluable acquisition for the library of every ophthalmic surgeon, for guidance and as a reference in daily surgery, both minor and major.

—Olga Sitchevska, M.D.

TEXTBOOK OF PEDIATRICS. Edited by Waldo E. Nelson, M.D., Professor of Pediatrics, Temple University School of Medicine; Medical Director of St. Christopher's Hospital for Children; with the collaboration of seventy contributors. Sixth Edition. Pp. 1,581, 478 figures. Price $15.00. W. B. Saunders, Philadelphia, 1954.

This latest edition in the Griffith-Mitchell-Nelson series appears under the sole editorship of Dr. Nelson.

It has been described as "the best textbook ever written," and there can be no doubt that it is, if not the best, one of the very superior textbooks on any medical subject now available.

The contributors include, as in the previous editions, most of the outstanding authorities now writing in the field of pediatrics. Many were contributors to the Fifth Edition, with some shifting to different subjects. (Some of the changes tempt to frivolous comment, as Dr. Bartram from "Parenteral Administration of Fluids" to "Feeding of Infants.")

Any reader with a new general textbook will invariably find missing or inadequate the treatment of some subject which he decides to study. Nevertheless, there are few omissions here. The chapter on Psychological Disorders is very brief, but in view of the enormous literature on pediatric psychology, probably adequate. Or one could question the comparatively large amount of space given for example to kwashiorkor. But such minor criticisms only emphasize the general excellence of the text.

Dr. Nelson has managed to reduce slightly the number of pages, mostly by rearranging or telescoping the subjects. For example, the separate section on the premature infant has been omitted, and the material included in the discussion of neonatal physiology and pathology; the separate articles on cardiac surgery are omitted and the general type of surgical repair described in a few paragraphs under "Treatment" of each defect.

Condensation has permitted the use of larger type and wider spacing. The latter is, paradoxically, sometimes a handicap. The book retains its double column page, and because of the frequent subheadings and wide spaces between paragraphs, the eye often tends to jump across to the second column. And, although slightly smaller than its predecessor, the book is still too large to handle comfortably. Although its admirable conciseness makes it attractive for intermittent reading, as well as serious study, its size precludes any casual handling. A revision into two volumes is the only important suggestion offered for consideration in preparing a seventh edition.

—M. Eugenia Geib, M.D.

A.M.A. FUNDAMENTALS OF ANESTHESIA. Prepared under the Editorial Direction of the Consultant Committee for Revision of Fundamentals of Anesthesia, a publication of the Council on Pharmacy and Chemistry of the American Medical Association. Third Edition. Pp. 279, 89 figures. Price $6.00. W. B. Saunders Company, Philadelphia, 1954.

As a quick reference book, this small but concise edition is a valuable addition to the bookshelf of the student in anesthesia as well as the part-time anesthetist. Every practical phase of anesthesia is covered in abstract form and in easy-to-read tabulation.

Physiology and pharmacology are well covered as are the actual techniques. The physician who is called upon to choose a particular type of anesthesia in the absence of an anesthesiologist, would do well to consider the the problems involved as outlined here.

In the postoperative period, the more common complications, too often overlooked, are discussed. Ordinarily, one would not expect a book of this small size to pay much attention to all the important details. However, from such an imposing array of authors; one is not surprised to find a book of such usefulness.

—Richard R. Lamb, M.D.

Books Received

The following books have been received for review, and are recommended to our readers.

BEYOND THE GERM THEORY: The Roles of Deprivation and Stress in Health and Disease. Edited by Iago Galdston, M.D., with Contributions by K. D. Kruse, M.D., George R. Cowgill, Ph.D., Abraham Kardiner, M.D., and others. Pp. 175. Price $4.00. Health Education Council, New York, 1954.

THE DEAF AND THEIR PROBLEMS: A Study in Special Education. By Kenneth W. Hodgson, M.A. (Cantac.), with a Preface by Sir Richard Paget, Bart. Pp. 357. Price $6.00. Philosophical Library, New York, 1954.

EMPLOYMENT PROBLEMS OF OLDER WOMEN —An Annotated Bibliography. Women's Bureau Publication D-70. Price $0.35. Government Printing Office, Washington, D.C., 1954.

PSYCHOLOGY AS A PROFESSION. By Robert I. Watson, Ph.D., Professor of Psychology and Director, Graduate Training Program in Clinical Psychology, Northwestern University. A Doubleday Paper in Psychology. Pp. 65. Price $0.95. Doubleday and Company, Garden City, New York, 1954.

APPLIED PATHOLOGY: An Introduction to Disease and its Control. By Charles G. Darlington, M.D., F.A.C.P., Professor of Pathology and Director of the Undergraduate Cancer Teaching Project, New York University College of Dentistry; and Charlotte F. Davenport, R.N., B.S., Assistant Director of Nursing Service, Muhlenberg Hospital, Plainfield, N.J. With the Collaboration of Albert Segenreich, B.S., M.D., Assistant Professor of Pathology, New York University College of Dentistry. Second Edition, Revised. Pp. 500. 154 figures, 4 color plates, and 29 charts. Price $4.75. J. B. Lippincott Company, Philadelphia, 1954.

This standard teaching text for nurses has been thoroughly revised to conform with progress in the medical sciences since its initial printing in 1942. Notable are the sections on oncology, disease control and prevention, microbiology, and special laboratory procedures. The original structure is maintained but format and type are more pleasing.

THE SEXUAL NATURE OF MAN and Its Management. By Clarence Leuba, Ph.D., Professor and Chairman, Department of Psychology, Antioch College. A Doubleday Paper in Psychology. Pp. 40. Price $0.85. Doubleday and Company, Garden City, New York, 1954.

The over-all picture of sex, its origin, fashions, comparisons and problems, are reviewed briefly but cogently by an outstanding psychologist, whose final summation is expressed as a "program for moderns" which is flexible and practical if not deeply moral.

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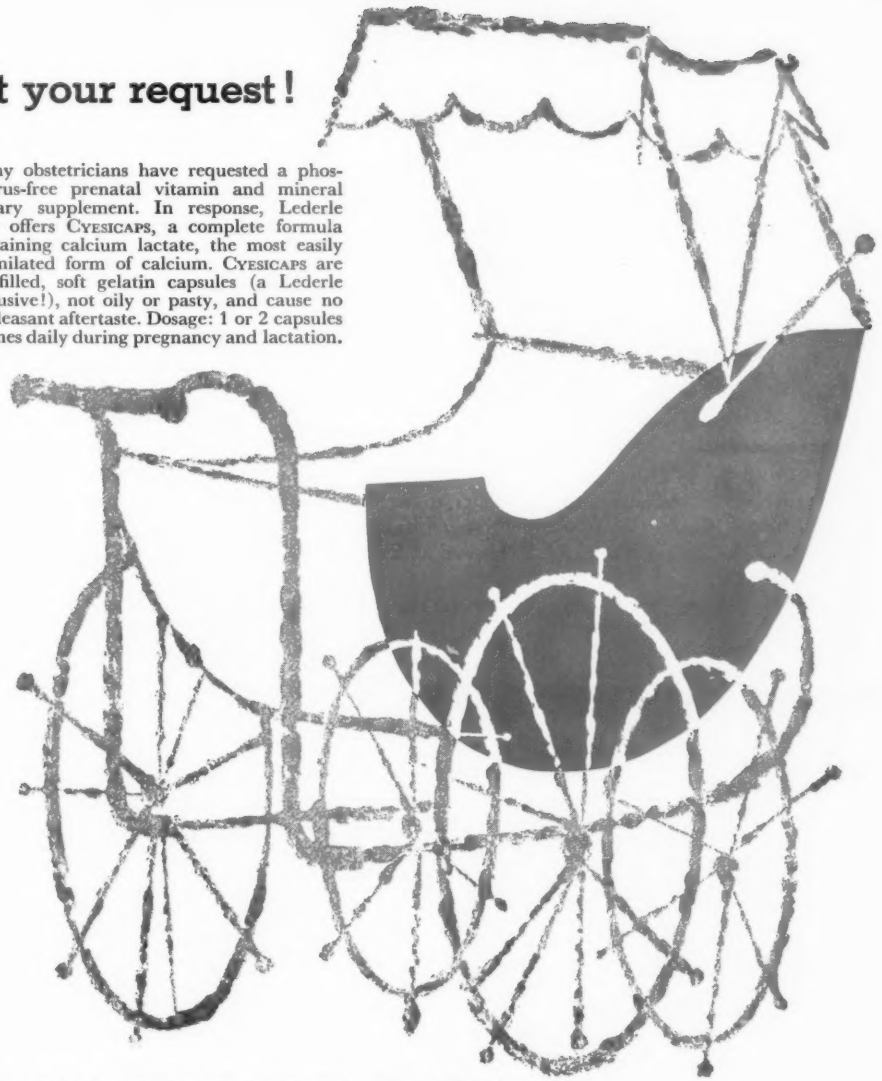

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EDITORIAL FORECAST

February 1955

Dr. Madge C. L. McGuinness is the Guest Editor for the special Branch Eighteen issue of the JOURNAL, appearing in February. A variety of articles will be presented, and material about medical women in New York State, both past and present. Included will be:

"Some Constructive Applications of Atomic Energy," by Marylou Ingram, M.D. This was a paper presented before the Women's Medical Society of New York State on October 9, 1954.

"Medical Practice and the Treatment of Schizophrenia in Childhood," by Dorothy Donley-Dowd, M.D.

"Foot Disorders in Women," by Dudley J. Morton, M.D.

"Persistent Abdominal Pain Caused by Pyelonephritis," a case history by Gertrude Felshin, M.D.

Special articles are: "The Strang Cancer Clinics at the New York Infirmary," by Elise S. L'Esperance, M.D.; "A Half Century of Progress in Public Health," by Sophie Rabinoff, M.D., M.S.P.H.; and "What the Doctor and Patient Can Expect of Each Other," by Julia V. Lichtenstein, M.D.

A History of the Women's Medical Society of New York State, by Isabelle F. Borden, M.D.

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"Due to the fact that reservation requests are already being received in considerable numbers, it is strongly recommended that the reservations be submitted immediately."

—JOHN E. LEISHMAN, *Director of Sales*
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May we reiterate: You will be unable to retain your same room at the Dennis for the AMA meeting unless the above directions are followed and particular request made to hold your same room.

For AMWA reservations use the blank at the bottom of this page.

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Speaking of Children

HELP FOR CHILD WAR VICTIMS

International schools for child victims of war and other misfortune were started in 1950 by Stig Guldberg, a Danish officer who lost both hands in an explosion in 1947. The schools have already rendered valuable service. The Guldberg Plan, a scheme for the relief of disabled children, has been in operation the last five summers at so-called "Guldberg Camps."

Having successfully overcome his own handicaps, Mr. Guldberg set about the business of achieving his two ambitions. One was to find means of preventing the many accidents caused by explosions in countries that had been involved in the war. In order to spread information about the danger which lay in wait for children and young people he made a film strip entitled "Death at Play."

His second ambition was to help the "forgotten children" disabled in the war. After studying the problem in Britain and the United States, he established his first camp school in 1950 at Karemose in Denmark. This confirmed him in the opinion that a disabled person's situation is never worse than his environment makes it.

Since then Guldberg Camps, held every summer, have grown in size. Their chief aim is to develop self-confidence, thus helping the children who attend them to live and work on normal terms with other people. Instruction is necessarily rather free and follows the general lines of that given at Danish folk high schools. The subjects taught are reading, music and singing, and sports and games. Experience has shown that the most direct way of instilling self-confidence and inducing a changed attitude toward their disabilities is by means of sport. The children need help not pity. Many of them, deprived of the fellowship normally met with in and out of school, are able to experience it in these camps. By being given a share in the camp administration they are trained to take initiative and helped to develop a healthy social outlook.

Thirteen camps organized since the first one in 1950 have been made possible by the financial support and other assistance of public bodies, firms and individuals in Denmark and other countries. In 1954 children from Austria, Denmark, France, Norway, Switzerland and West Germany attended the three camps that were held in Austria, Bavaria, and Denmark, respectively.

For 1955 a special camp is planned for Denmark to be attended by about eight boys from each of ten or eleven nations. It is hoped that Britain, Canada, and the United States will be represented on this occasion.

Through these camps, Mr. Guldberg looks forward to creating an interest in the establishment in western Europe of colleges for disabled persons which would enable even heavily handicapped young people to study at universities and other centers of higher education. (Condensed from Danish Foreign Office Journal No. 14, Dec. '54.)

COLOR FILM ON NEPHROSIS IN CHILDREN

An eighteen-minute color and sound film, "Nephrosis in Children," outlines the problems of diagnosis and treatment of nephrosis, a kidney condition, which is still fatal to children in about 50 percent of all cases. The film notes that antibiotics such as terramycin have helped to reduce the danger of complicating infections in the disease, but that much remains to be done in order to reduce the death rate. Two versions of the film were made under the medical supervision of Dr. Robert E. Cooke, associate professor of pediatrics at Yale University School of Medicine, one available for showing before groups of general practitioners, interns, and medical students, the other suitable for screening before lay audiences. The former was given its premier last June at the annual meeting of the American Medical Association. Produced for the Medical Advisory Board of the National Nephrosis Foundation, the film was sponsored by Pfizer Laboratories, Division of Chas. Pfizer & Co., Inc. It is distributed by them to parent groups and made available for suitable television outlets. A booklet prepared by Dr. Cooke and Dr. Leo Leveridge of Pfizer's medical film department, summarizes important data on nephrosis. It is for distribution to those who view "Nephrosis in Children."

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City ..... State .....
Single ..... Married ..... Widow ..... Children .....
College ..... Graduation year .....
Graduate study ..... Further degrees .....
What have you practiced? ..... Where? .....
Organizations to which you belong .....
Offices held .....
Institutions with which you are, or have been, associated .....
.....
Hospital staff .....
Specialty ..... Further study ..... Dates .....
Research .....
Other types of professional activities .....
Special clinical projects .....
Publications .....
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GULIELMA FELL ALSOP, *Chairman,* Historical Committtee

IT HAS BEEN FOUND THAT—

Rubbing snow on frostbite seems out-dated, today's accepted treatment consisting of rapid thawing of frozen areas by baths somewhat above body temperature. After thawing it is recommended that the extremity be dried and sprayed with an aqueous solution of Furacin® (Eaton). Greasy and oily applications are to be avoided. After necrotic tissue is removed and defects are closed by appropriate trimming of skin flaps, Furacin gauze dressings are applied. (Report by W. O. Kleitsch, M.D., and E. K. Connors, M.D., Creighton University School of Medicine in *Post Graduate Medicine* 16: 191 Sept. 1954).

A skeletal muscle relaxant with a central nervous system sedative effect (Mephate, Robins) brought satisfactory relief in 86.8 percent of 91 successive cases of injured lower backs. Research was carried on at Sperry Gyroscope Co., Great Neck, New York. (Report by Robert Jessup, M.D., Raymond J. Murray, M.D., and Albert Rossi, M.D., in *American Practitioner and Digest of Treatment* 5: 792, Oct. 1954).

A study of "Chronic Disease and Vitamin C," by Leo J. Cass, M.D., Willem S. Frederik, M.D., and J. D. Cohen, M.D., notes that elderly persons show a low level of this vitamin in their blood owing possibly to a low vitamin C content in the foods they consume or losses occuring in food preparation. Three mixed groups of well and chronically ill aged patients observed at Long Island Hospital, Boston, showed whole blood vitamin C levels of .48, .49 and .43 mg. per 100 cc.—well below the normal range of .6 to 2.5. Upon receiving orange juice or ascorbic acid they showed a rapid rise in the vitamin C level. The study, which involved 140 patients, was reported in *Geriatrics* (9: 375, Aug. '54).

Scurvy is even more prevalent in the general population than is commonly realized, according to the findings of George E. Morris, M.D., assistant clinical professor of dermatology, Tufts Medical College, Boston. He observed that 15 of his new patients, or 5.45 percent of the total seen, had frank or latent scurvy. These patients from all walks of life, "believed that they were following a balanced diet." Dr. Morris discovered the prescorbutic state through laboratory tests since "there are no clinical diagnostic criteria." Eight of the cases showed frank clinical scurvy and all 15 showed suboptimal vitamin C levels. All responded with post-therapeutic high levels of blood vitamin C after receiving large doses of vitamin C in the form of citrus juices and tablets. He warns those in charge of institutional feeding "to maintain adequate vitamin content in diet as scurvy was found in four men studying in a theological seminary." (Reported in *American Practitioner and Digest of Treatment* 5: 658, Aug. '54).

NEW PRODUCTS

Peptic ulcer	Prydon Spansule Capsules and Prydonnel Spansule Capsules	Smith, Kline and French
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Sore throat	Candettes	Pfizer Laboratories
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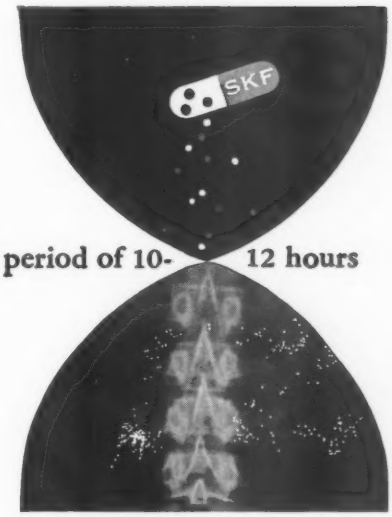

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MENTAL HEALTH AWARD TO SMITH, KLINE & FRENCH

For "their outstanding contribution to public understanding of the problem of mental illness" the American Medical Association and Smith, Kline & French Laboratories were honored at a luncheon on December 7 by the National Association for Mental Health. The tribute to THE MARCH OF MEDICINE telecast entitled "Search for Sanity" was presented by Mrs. Felix duPont, board member of the mental health group, to Dr. Leo H. Bartemeier, Chairman of the AMA Committee on Mental Health, and Mr. Francis Boyer, President of Smith, Kline & French Laboratories.

The telecast, presented by the AMA and SKF on October 31 over the National Broadcasting Company's television network, took the American public on an unprecedented tour of one of the country's largest mental hospitals, Hudson River State Hospital in Poughkeepsie, N.Y. It reported on the care and treatment of the patients and on research now under way in this field.

Mrs. duPont described the telecast as "one of the most exciting and, without question, one of the finest portrayals of the problem of mental illness, the work that is being done to combat it, the hopefulness of the outlook, and the need for public sympathy and action." Officials of the National Association for Mental Health expressed the opinion that it "did a more sympathetic, comprehensive, convincing and stimulating job than any other television or radio program that has ever been seen or heard on the subject."

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MEDICAL JOURNAL OF THE AIR—"VIDECLINIC"

February 9, 1955, 8:30 p.m., E.S.T., there will be a closed-circuit program on heart disease. This coast to coast hookup for Boston, New York, Brooklyn, Detroit, Cincinnati, Chicago, Baltimore, Cleveland, Philadelphia, Pittsburgh, Providence, Washington, Indianapolis, Louisville, Albany, Troy, Schenectady, Buffalo, Dayton, Toledo, Youngstown, St. Louis, Milwaukee, Los Angeles, San Francisco, Houston, New Orleans, Atlanta, Dallas, Denver, Birmingham ". . . Will bring 'full array' of modern television techniques—live television, 'remote pickups' from medical centers, and adequate film coverage—to the service of medical education for the first time." It is to be presented by the AMA in cooperation with Smith, Kline and French, over "Telesession" facilities of Theater Television, Inc., New York.

DRUG ADDICTION—A MEDICAL HAZARD. Color film, 27 minutes. A "forceful and dramatic presentation" designed to alert medical students to social and health consequences of drug addiction. Sponsored by Federal Bureau of Narcotics and the Department of Pharmacology, University of Maryland School of Medicine in association with Winthrop-Stearns. Script by John C. Krantz, Jr., M.D.; narrator, the Hon. Harry J. Anslinger.

THE VALIANT HEART. Half-hour film story of a community's attack on rheumatic fever; filmed in Wolfboro, N.H. Residents of area played all roles. Produced for American Heart Association and affiliates by MPO Productions, Inc., with funds contributed as a public service by E. R. Squibb & Sons. For national distribution by affiliates and chapters of American Heart Association.

A MATTER OF TIME. Fifteen minute documentary color film, produced by Unifilms, Inc. Dramatizes the hopeful story of what medical research is doing to conquer heart disease. Presented by Institute of Life Insurance for the Life Insurance Medical Research Fund. Shows laboratories, hospitals, 'jiggle bed', oscillograph, mechanical heart. Animation and scale models illustrate four major types of heart disease. Available on free-loan basis from Association Films' Libraries. For information: Association Films, Inc., 347 Madison Ave., New York 17, N.Y.

CONSTITUTION OF THE AMERICAN MEDICAL WOMEN'S ASSOCIATION, INC.

Article III, Section 1a. **Active Members** "shall be members of a Branch, if any local Branch exists; if not, they may be Members-at-large."

Article III, Section 6. **Associate Members** "shall be: (1) Medical women in the first year of practice; (2) women interns, residents-in-training, and fellows. Associate members shall not pay dues and shall have all privileges of membership, except voting, holding office, and membership in the Medical Women's International Association."

Article III, Section 7. **Junior Members** "shall be members of Junior Branches in the four undergraduate years of medical school."

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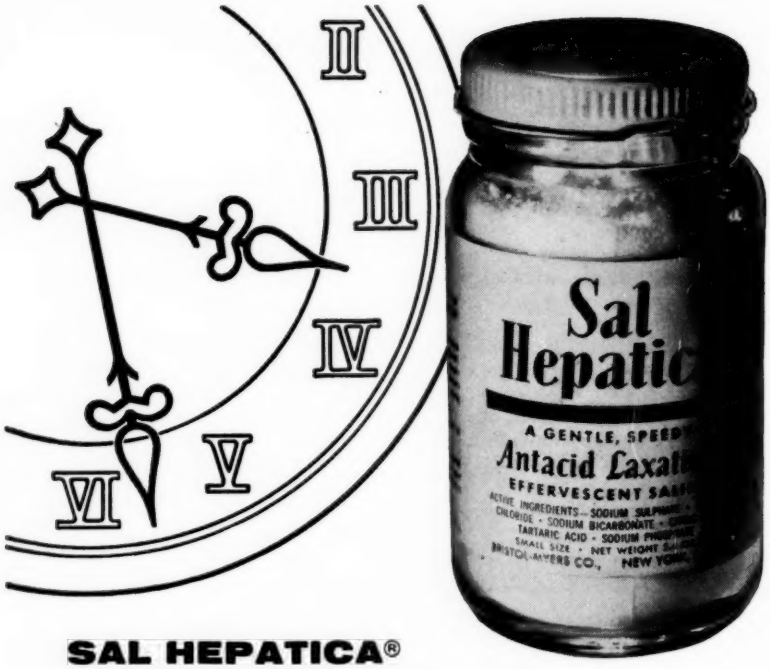

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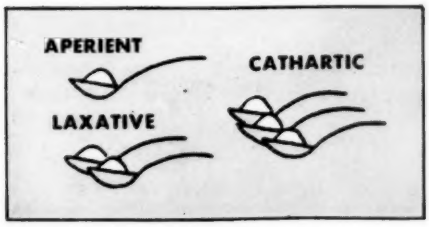

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References:

1. The Physiological Basis of Medical Practice. 1945. p. 486.
2. New England J. Med. 235:80, July 18, 1946.

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References: 1. J.A.M.A. 153:185, 1953. **2.** N.N.R. 1953, p. 486.